10-B-62

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1894.

No. 161.

THE MARKET STREET CABLE RAILWAY COMPANY, PLAINTIFF IN ERROR,

vs.

B. N. ROWLEY.

IN ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF CALIFORNIA.

FILED MAY 12, 1891.

(14,638.)

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JUDD & DETWEILER, PRINTERS, WASHINGTON, D. C., JULY 18, 1894.

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1 *Declaration.*

In the Circuit Court of the United States, Ninth Circuit, in and for the Northern District of California, of the February Term of said Court, of the Year Eighteen Hundred and Ninety-one.

B. N. ROWLEY)
vs.
MARKET STREET CABLE RAILWAY COMPANY (a Corporation).)

B. N. Rowley, of the city and county of San Francisco, State of California, a citizen of said State of California and of the United States, plaintiff in this suit, complains of the Market Street Cable Railway Company, a corporation organized and existing under and by virtue of the laws of the State of California and having its principal place of business in the city and county of San Francisco, in said State, and for cause of action plaintiff alleges—

That heretofore, to wit, prior to the 28th day of June, 1887, Benjamin W. Lyon and Reuben Munro, of San Francisco, California, were the original, first, and joint inventors of a certain new and useful improvement in car-axle lubricators, fully shown and described in the letters patent hereinafter referred to; that the same was a new and useful invention and was not known or used by others in this country nor patented nor described in any printed publication in this or any foreign country prior to the application of the

2 said Benjamin W. Lyon and Reuben Munro for a patent therefor, nor had it been in public use or on sale for two years nor abandoned nor was it proved to have been abandoned.

And for that the said Benjamin W. Lyon and Reuben Munro, being as aforesaid the inventors thereof, did, on said 28th day of June, 1887, after due application therefor, obtain letters patent of the United States for the said invention, granting unto them, their heirs and assigns, for the term of seventeen years from said last-named day, the full and exclusive right and liberty to make, use, and vend the said invention throughout the United States and the territories thereof.

And for that the said letters patent were issued in due form of law, under the seal of the Patent Office of the United States, and were signed by the Secretary of the Interior and countersigned by the Commissioner of Patents of the United States; which said letters patent were and are numbered 365,754 and bore date the 28th day of June, 1887, and were on said last-named day issued and delivered to said Lyon and Munro; which said letters patent are ready in court to be produced or a duly authenticated copy thereof.

And for that prior to the issuance of said letters patent all the proceedings were duly had and taken which were required by law to be had or taken prior to the issuance of letters patents for new and useful inventions.

And the plaintiff says that subsequent to the issue of said letters patent, to wit, on the — day of ——, 1890, all the right, title, and

interest of the said Benjamin W. Lyon and Reuben Munro in and to said invention and the letters patent aforesaid in and within the State of California, together with all past-accrued claims and
3 demands thereunder in said State, were duly and regularly sold and assigned to the plaintiff herein, and that the said plaintiff is now the sole and exclusive owner of said letters patent and invention in and within said State of California and is entitled to sue for and recover all damages that have accrued under said patent within said State since the date of said patent.

Yet notwithstanding the premises the defendant herein, having full knowledge thereof, and in violation of the exclusive rights and privileges secured to said plaintiff and his assignors by said letters patent and utterly disregarding the same and contriving to injure and damage the plaintiff and his assignors since the issuance of said letters patent and prior to the commencement of this action, without the license or consent of plaintiff or his assignors in the State of California and the northern district thereof or of any license under said patent whatever, has wrongfully and unlawfully made and used and now continues to make and use a large number of car-axle lubricators containing and embracing the invention described, claimed, and patented in and by the letters patent aforesaid.

That said car-axle lubricators made and used by the said defendant as aforesaid were and are and each of them was and is an infringement upon said letters patent No. 365,754 and were made according to the specification thereof, all contrary to the law and the statutes of the United States in that behalf made and provided.

Whereby and by reason of the premises and the infringement aforesaid the plaintiff and his assignors have been greatly injured and damaged and deprived of large royalties, gains, and ad-
4 vantages which they would have otherwise *have* derived, and have sustained actual damages thereby in a large sum, to wit, in the sum of ten thousand dollars.

Wherefore and by force of the statutes of the United States a right of action has accrued to plaintiff to recover the said actual damages and such additional sum, not exceeding in the aggregate three times the amount of said actual damages, as the court may see fit to adjudge and order, besides costs of suit.

Yet the defendant, though often requested, has never paid the same or any part thereof, but it has refused and still refuses so to do; and therefore plaintiff brings this suit.

JNO. L. BOONE,
Attorney for Plaintiff.

Endorsed: Filed January 19, 1891. L. S. B. Sawyer, clerk.

5 *Summons.*

UNITED STATES OF AMERICA:

Circuit Court of the United States, Ninth Circuit, Northern District of California.

B. N. ROWLEY, Plaintiff,
vs.
MARKET STREET CABLE RAILWAY COMPANY (a Corporation), Defendant.

Action brought in the said circuit court and the complaint filed in the office of the clerk of said circuit court, in the city and county of San Francisco.

The President of the United States of America to Market Street Cable Railway Company (a corporation), defendant, Greeting:

You are hereby required to appear in an action brought against you by the above-named plaintiff in the circuit court of the United States, ninth circuit, in and for the northern district of California, and to file your plea, answer, or demurrer to the complaint filed therein (a certified copy of which accompanies this summons) in the office of the clerk of said court, in the city and county of San Francisco, within ten days after the service on you of this summons, if served in this county; or, if served out of this county, then within thirty days, or judgment by default will be taken against you.

The said action is brought to recover from you, said defendant, the sum of ten thousand dollars, actual damages, together with such additional sum, not exceeding in the aggregate three times the amount of such actual damages, as the court may see fit to
6 adjudge, said damages alleged to have been sustained by plaintiff by reason of the infringement by you of certain letters patent of the United States, No. 365,754, granted and issued on the 28th day of June, 1887, to Benjamin W. Lyon and Reuben Monro and by said Lyon & Monro duly assigned to plaintiff, together with the costs of this action, all of which is more fully set out in the original complaint on file herein, to which reference is hereby made, and if you fail to appear and plead, answer, or demur, as herein required, your default will be entered and the plaintiff will apply to the court for the relief demanded in the complaint herein.

Witness the Honorable Melville W. Fuller, Chief Justice of the Supreme Court of the United States, this 19th day of Janu-
[SEAL.] ary, in the year of our Lord one thousand eight hundred and ninety-one, and of our Independence the 115th.

L. S. B. SAWYER, *Clerk*,
By F. D. MONCKTON,
Deputy Clerk.

Endorsed.

United States marshal's office, northern district of California.

I hereby certify that I received the within writ on the 20th day of January, 1891, and personally served the same on the 21st day of January, 1891, on Market St. Cable R. R. Company by delivering to and leaving with Jos. L. Willcutt, secretary of said Market Street Railroad Company, said defendant named therein, personally, at the city and county of San Francisco, in said district, an attested copy thereof, together with a copy of the complaint, certified to by John L. Boone, pl'ff's att'y, attached thereto.

San Francisco, January 21st, 1891.

WM. G. LONG,
U. S. Marshal.

Filed January 21, 1891.

L. S. B. SAWYER, *Clerk*,
By F. D. MONCKTON,
Deputy Clerk.

7 *Answer.*

In the Circuit Court of the United States, Ninth Judicial Circuit, in and for the Northern District of California.

B. N. ROWLEY, Plaintiff, *vs.* MARKET STREET CABLE RAILWAY COMPANY, Defendant.	No. 11201. Answer. Feb'y Term, 1891.

And now comes said defendant, The Market Street Cable Railway Company, by Wm. F. Booth, its attorney, and says that it is not guilty of the supposed grievances above laid to its charge or any or either of them or any part thereof in the manner and form as the said plaintiff hath above complained, and of this the said defendant puts itself upon the country.

And for a further plea in this behalf the defendant says that the device or apparatus described and claimed in the letters patent mentioned in the plaintiff's declaration was not an invention when produced by the said Benjamin W. Lyon and Reuben Munro, and of this the defendant puts itself upon the country.

And for a further plea in this behalf the defendant says that the said apparatus or device described and claimed in the letters patent mentioned in plaintiff's declaration was not the joint invention of said applicants, Benjamin W. Lyon and Reuben Munro, but says, on the contrary, that it was the sole invention of but one of them, and of this the defendant puts itself upon the country.

And for a further plea in this behalf defendant says that said patentees, Benjamin W. Lyon and Reuben Munro, made specimens of the said patented car-axle lubricators and did not mark
8 them "patented" and the date, as required by statute, and did not notify the defendant of infringement, and of this the defendant puts itself upon the country.

And for a further plea in this behalf defendant says that it possessed at all times during the commission of the acts complained of and now possesses a license from said applicants and patentees, Benjamin W. Lyon and Reuben Munro, which authorized all the doings which constitute the alleged infringement complained of by plaintiff, and of this the defendant puts itself upon the country.

And for a further plea in this behalf defendant says that many of the car-axle lubricators complained of as infringing devices were constructed, put and used upon the railroad cars of the defendant with the knowledge, consent, and allowance of said patentees, Benjamin W. Lyon and Reuben Munro, prior to their application for the said letters patent mentioned in the complaint, and thereby and by virtue of the statute in such case made and provided the defendant became possessed of the right to use said car-axle lubricators so put and used upon its cars prior to said application during the life of said patent without liability to the said patentees or to the plaintiff herein, and of this the defendant puts itself upon the country.

WM. F. BOOTH,
Attorney for Defendant.

Endorsed: Service of the within answer acknowledged this 30th day of January, 1891. Jno. L. Boone, att'y for plaintiff. Filed January 30th, 1891. L. S. B. Sawyer, clerk.

9 *Verdict.*

UNITED STATES OF AMERICA:

Circuit Court of the United States, Ninth Judicial Circuit, Northern District of California.

B. N. ROWLEY
vs.
MARKET STREET CABLE RAILWAY COMPANY. } No. 11201.

We, the jury, find in favor of the plaintiff and assess the damages at the sum of $100.00 (one hundred dollars).

W. W. HOBART, *Foreman.*

Endorsed: Filed March 13, 1891. L. S. B. Sawyer, clerk.

10 *Judgment.*

In the Circuit Court of the United States, Ninth Judicial Circuit, Northern District of California.

B. N. ROWLEY
vs.
MARKET STREET CABLE RAILWAY COMPANY. } No. 11201.

This cause having come on regularly for trial on the 10th day of March, 1891, being a day in the February, 1891, term of said court, before the court and a jury of twelve men duly impaneled, John L.

Boone, Esq., appearing on behalf of the plaintiff and Wm. F. Booth, Esq., appearing on behalf of the defendant, and the trial having been proceeded with on the 11th, 12th, and 13th days of March, in said year and term, and the evidence, oral and documentary, on behalf of the respective parties having been introduced and closed and the cause, after arguments of counsel and the instructions of the court, having been submitted to the jury and the jury having subsequently rendered the following verdict, to wit, "We, the jury, find in favor of the plaintiff and assess the damages at the sum of $100 (one hundred dollars)," and the court having ordered that judgment be entered herein in accordance with said verdict and for costs:

Now, therefore, by virtue of the law and by reason of the premises aforesaid, it is considered by the court that B. N. Rowley, plaintiff, do have and recover of and from Market Street Cable Railway Company, defendant, the sum of one hundred dollars damages, together with his costs in this behalf expended, taxed at $67.85.

Judgment entered March 13, 1891.

L. S. B. SAWYER, *Clerk.*

11 I hereby certify that the foregoing is a full, true, and correct copy of an original judgment entered in the above-entitled cause.

[SEAL.] Attest my hand and the seal of said circuit court this 13th day of March, A. D. 1891.

L. S. B. SAWYER, *Clerk.*

Endorsed: Filed March 13, 1891. L. S. B. Sawyer, clerk.

12 *Clerk's Certificate to Judgment-roll.*

In the Circuit Court of the United States, Ninth Judicial Circuit, in and for the Northern District of California.

B. N. ROWLEY
vs.
MARKET STREET CABLE RAILWAY COMPANY. } No. 11201.

I, L. S. B. Sawyer, clerk of the circuit court of the United States for the ninth judicial district, northern district of California, do hereby certify that the foregoing papers hereto annexed constitute the judgment-roll in the above-entitled action.

Attest my hand and the seal of said circuit court this 13th day of March, 1891.

[SEAL.]

L. S. B. SAWYER, *Clerk.*
By F. D. MONCKTON,
Deputy Clerk.

Endorsed: Judgment-roll. Filed March 13, 1891. L. S. B. Sawyer, clerk, by F. D. Monckton, deputy clerk.

13 *Bill of Exceptions.*

In the Circuit Court of the United States, Ninth Judicial Circuit in and for the Northern District of California.

B. N. ROWLEY, Plaintiff,
vs.
MARKET STREET CABLE RAILWAY COMPANY, Defendant. } No. 11201.

Defendant's bill of exceptions.

Be it remembered that at the regular February term of the above-named court for the year 1891, held at the city and county of San Francisco, State of California, the above-entitled action on the 10th day of March, 1891, came on regularly for trial before the court and a jury selected and empanelled to try the same, John L. Boone, Esq., appearing as counsel for plaintiff, and Wm. F. Booth, Esq., appearing as counsel for the defendant; whereupon the plaintiff, to sustain the issues on his part, put in evidence United States letters patent No. 365,754, bearing date June 28th, 1887, and granted to Benjamin W. Lyon and Reuben Munro for car-axle lubricator, which said letters patent were marked "Plaintiff's Exhibit A," and a copy of which is hereto annexed. Plaintiff also put in evidence an assignment from Benjamin W. Lyon and Reuben Munro to the plaintiff, B. N. Rowley, of said letters patent and rights of action for damages and profits for past infringements in and for the State of California, which said assignment was dated November 26th, 1890, and was marked "Plaintiff's Exhibit B."

14 The plaintiff was thereupon called and examined and testified to and described a model representing the device shown in the patent sued on, which said model was marked "Plaintiff's Exhibit C."

Plaintiff then called and elicited evidence from various witnesses of the use by the defendant on the cars of all its lines of the said patented lubricator and evidence bearing upon the measure of damages.

It was admitted and understood by the parties on both sides that the cable cars used by the defendant on its lines are constructed differently from other street and railroad cars in this: The cars, instead of having an axle extending across near each end with its journals bearing in boxes as ordinary horse and street cars are carried, are supported and carried on two swivel trucks, one near each end of the car similar to a railway car. The wheels which support these trucks are quite small in diameter on order to bring the body or floor of the car as near the ground as possible; that the defendant was the first to devise, construct, and run cars built in this way, and that all the cable cars used by the defendant are built in this way. It was also understood that the only method of oiling the journals of defendant's cars in use before the invention of Lyon and Munro was to make a chamber in the box around the

journal and fill it with cotton or other waste. The oil was then poured into this chamber and allowed to run down through a hole which connected the chamber with the journal bearing and be delivered upon the journal. That method caused much trouble and annoyance because the oil would often run out before the trip of the car was completed, and the car would finish its trip with a hot journal and would have to be run into the engine-house to have its journals cooled off. It was also admitted and understood
15 that the defendant controls and operates five distinct lines of cable cars in its system, viz., the Valencia St. line, the McAllister St. line, the Haight St. line, the Hayes Valley line, and the Castro St. line, each one being a distinct line, but each running on Market St. a portion of its length and branching therefrom at different points; that the patentees, Lyon and Munro placed their oil cups on the cars of the Hayes Valley line before the patent was applied for; also that the specific oil cups placed upon the Hayes Valley line of defendant's cars by the patentees before their application for a patent had wooden bottoms, and that after being in use a few months the wooden bottoms were swelled by the absorption of oil and burst.

Plaintiff also called in his behalf the patentees, Benjamin W. Lyon and Reuben Monro, who testified to the use of the patented lubricators by the defendant and to various matters in support of the plaintiff's issues. The following is their testimony in full, so far as it bears upon the second exception hereinafter stated:

BENJAMIN W. LYON was called on behalf of the plaintiff and testified as follows:

Mr. BOONE:

Q. You are one of the parties to whom this patent was issued, are you?

A. I am.

Q. At the time you made this invention jointly with Mr. Monro, what was your occupation and where were you engaged?

A. I was employed by the Market St. Company—railroad company.

Q. What was the particular character of your employment?

A. I was foreman—foreman of car repairs.

Q. Please state to the jury what induced you to get up or to assist or join in getting up a device for lubricating car axles.

16 A. Well, the first starting of it, they had just commenced a new line—that is, the Hayes St. line. The cars were new and they were different from the ones they had been running.

Q. In what did that difference consist?

A. In this respect: The wheels were larger than the old ones, and the consequence was that the cellar—the top part where they used to have packed with waste to pour oil into it—was reduced in size to the extent of one-half the extra size of the wheels, and the consequence was that it made less space there to hold the oil, and those cars in running bother a great deal, get hot and warm, and I

tried one or two little devices to see if I could not do away with that. I made a small cup in the first place, put some waste in it to pour oil into it, to pour over the top of the journal of the car, and tried that for a day or two, and found that it did not work properly and did not fill the bill; did not prevent that heating of the journals, and also it allowed a waste of oil, and I concluded that I would try and see if I could not get up something to remedy that fault or evil. I studied over the thing for several days, at different times when times were quiet, and to get up anything new requires considerable thought and study no matter how simple it is, and finally I got up this cup that we have got. I made a cup myself with a wooden bottom and had this same tube, using the same tube in the top of the brass, this small tube that connected with this cup, and made a temporary cup with a sort of yeast-powder can with a little cover on top, and in using that valve the handiest thing that I could get hold of was a screw, and I did that because it answered that purpose for a valve with a tail to it to keep it in a perpendicular position when the car was laying quiet. I tried it before putting it on the car, giving it as near as I could the motion with a jar and shake that it would get on the car, and I found one dif-
17 ficulty with it then which my partner, Mr. Munro—there was no secret about the matter at that time at all. At that time I had no intention of getting a patent upon it, and I spoke to Mr. Munro about it—that is my present partner—and the next day he suggested that we put a spring on to prevent this block raising too high. We put that on and went and put it onto a car and tried it and found it worked very nicely and quite a saving, as near as I could see. Of course I kept no record of the saving; did not think anything of it at the time. That is the way I come to get it up.

Q. After you put this new oil cup of yours on the cars, did they have any trouble?

A. They had trouble in this way: The first ones we put on were wooden bottoms—made them out of wood simply because we could make them ourselves and make them cheap. Our idea was to go to as little expense as possible. Those wooden bottoms would become saturated with oil and burst.

Q. As far as the operation of the cup in feeding the oil to the journal was concerned, how did it work?

A. It worked very well.

Q. How long did the first oil cups which you placed on the Hayes Valley line remain in use, if you know?

A. Well, I could not tell you. I did not keep any record of it at all.

Q. Are they there now?

A. Which?

Q. The ones that you placed there first.

A. The wooden bottoms?

Q. Yes, sir.

A. No; they are not there now.

Q. What became of them?

A. I guess they are in the scrap pile.

Q. What was put in their place when they were taken out?

18 A. We put one similar to it, except that it was a metal bottom.

Q. Now, where have you been employed, Mr. Lyon, during the period since the time you first applied the oil cup on the Hayes Valley cars?

A. I have been employed by the same company.

Q. Are you in their employ still?

A. Yes, sir.

Q. What kind of cups, oil cups or oil feeders, are in use now on the Market St. several lines of cars?

A. Well, it is the same cup that they have been having there right along; those cups that I have just been speaking of.

Q. Did you at any time give the Market St. Cable Railway Company any license or right to use this cup?

A. They never asked me for any.

Q. How came they to go ahead and put the cups on there, if you know?

A. Well, the first one that I put on I put on from Mr. Morton's authority.

Q. Then who put the subsequent ones on?

A. Well, everybody put them on; all the men in their employ. You must understand that they have built a number of shops and they have different men employed at these different shops.

Q. By whose orders, if you know, were they placed upon the cars?

A. Well, I don't know as there are any particular orders; they just kept putting—putting them on; that was all; the same as we do anything else.

Q. Did any one ever apply to you for a right or license to use this oil cup on that line?

A. No; I don't believe they did.

Q. How long before you applied for your patent was it that you placed these oilers on the Hayes Valley line?

A. I think it must have been six months after the first box

19 was put on, as near as I recollect.

Q. Before your patent was issued or before you applied for a patent; which do you refer to?

A. Before we applied for the patent.

Q. On the face of the patent here we see the words "application filed January 29th, 1887." Now, if that was true that you applied for the patent on the 29th day of January, 1887, when would it be, as near as you can recollect, that you first placed this lubricator on the Hayes Valley car?

A. Well, I think it was on either—the first one must have been running six months.

Q. Before the date of this application?

A. Before we made an application for patent; yes, sir

Cross-examination.

Mr. BOOTH:

Q. Mr. Lyon, you say you are foreman of the car-repairers?
A. Yes, sir.
Q. Do you still occupy that position?
A. Yes, sir.
Q. Well, in that position it was your duty to see to all the cars of the company. Did you see to all the cars of the company?
A. Certainly, as far as the repairing was concerned. If there was anything out of order I was supposed to look after it.

Mr. BOONE:

Q. I desire to ask a question I forgot. Mr. Lyon, did you ever receive any remuneration whatever from the railroad company, defendant in this case, for the use of these cups?
A. No, sir.
Q. Did they give you any increase of salary on that account?
A. No, sir.

Mr. BOOTH:

Q. Well, in the course of your duty did you go from car-house to car-house and see to all the cars?
A. Yes, sir.
Q. You said, Mr. Lyon, that you had made a number of
20 experiments to see whether you could not overcome the difficulty attending the whole system of oiling the cars, and that the first thing you hit upon was simply a cup into which you placed some absorbent material to receive the oil; is that so?
A. That is what I put on in the first place—onto the Hayes street.
Q. Onto the Hayes St.?
A. Yes, sir.
Q. Then afterwards you added the valve, this screw that is in the cup that jumps up and down with the motion of the car?
A. That was afterwards that I made this present cup with the valve.
Q. How long do you suppose after that was it that you inserted the valve in the cup?
A. Oh, it was a very short time; I don't suppose more than a week, if it was that.
Q. Now, Mr. Lyon, just repeat the circumstances relating to the oilers upon the Hayes St. line and your connection with those circumstances.

The COURT: Do you mean the use of the cup?
Mr. BOOTH: Yes, sir; the use of the lubricator in suit.

Q. Whom did you see? Just tell whom you saw about it and how did you get it on there.
A. Well, the blacksmith at the Hayes St. shop then was Mr. Moran.

Mr. BOONE:

Q. That was the witness who testified here this morning?

A. That is the gentleman; yes, sir; and of course he was complaining about those cars heating—had to run them in once in awhile and take and oil them up, he said—and when I went around there to look after things he called my attention to it, and I suggested to him or made a little cup to hold this waste so as to
21 make a space there to hold oil. He claimed that he could not get oil enough. There was a little tube, and — used to pour oil in that tube, and of course it would hold but a very little oil and it would run right out, and then I put on this box with a little waste to make it as near as possible correspond to the way we were oiling the other cars; but I found by a trial of a few days, after asking him about it, that the thing did not work, and I then went to work and got up this other machine and put that on—this oiler.

Mr. BOOTH:

Q. Well, who made those first oil cups which were placed on the Hayes St. cars?

A. I made most of them.

Q. You made most of them?

A. A great many of them. The blacksmiths made some of them after they got started in.

Q. Did you know the blacksmith was making any of them?

A. Why, I instructed him.

Q. You instructed him to make them? Then they were put upon the company's cars, were they not, at your request? It was your desire that they should be put there?

A. At first?

Q. Yes.

A. It was my desire to put anything on to stop the trouble, and I spoke to Mr. Morton about it and he said to go ahead and what they would cost, and I told him — didn't cost but little, and he said go ahead and put them on; that was before it was patented.

Q. Now, do you know how many were put on before the application was made?

A. I could not tell you, sir; I really could not tell you, sir.

Q. Well, those that were put on after the application for a patent and after you obtained a patent and during succeeding years, by whom were they put on?

A. Just the same way; they were put on by the blacksmiths and by myself and those who were working on the trucks.

22 Q. Put on by the blacksmiths and yourself and by other men?

A. Yes, sir. Those metal ones were cast there at the brass foundries and they are carried to the shops and a piece of tin is supplied and I put them together, and the blacksmiths went to work and fixed most of them. I done some of them to start them along and they fixed the rest.

Q. They were all put on under your instructions, were they not?

A. Yes, sir; my instructions to the workmen there.

Q. And consequently you knew of them being put on, didn't you?

A. Why, of course I did.

Q. Now, Mr. Lyon, did you ever make any demand upon the company for compensation for the use of these oil cups?

A. No, sir.

Q. Why did you not make a demand upon them?

A. Well, really, I did not take a great deal of interest in it. There is a great many things that I have put on their cars that I never give a second thought. My idea was to make it as practicable as possible and help out in every way to make the thing a success, and the way I happen to get a patent on this was because Mr. Munro was interested in the matter with me; otherwise I hardly think I should have got a patent on it. Mr. Munro put up all the money. He put it up simply because he was in a position to do it and he wanted it patented and he was in it with me, and I was in a position that I could not say no, and I said go ahead and he done so.

Redirect examination.

Mr. Boone:

Q. Mr. Lyon, you testified that these cups were put on the cars by your instructions.

A. Yes, sir.

Q. Do you mean by that that you intended that the railroad company should use them without paying for them?

A. I didn't think anything about it at all; never gave it a thought.

Q. Did you speak to anybody or did anybody give you authority?

A. Mr. Morton.

23 Q. Who was Mr. Morton?

A. Mr. Morton was superintendent.

Q. Superintendent of the road, and he told you, then, to have them put on the cars?

A. Yes, sir.

Q. You say you never made any demand on the company for any recompense for the use of these cups?

A. No, sir.

Q. Do you know whether or not Mr. Munro did?

A. I don't know that he did. He never told me of it. I know he complained once and a while and seemed to think that we ought to get something, but still I don't know whether he ever made a demand or not.

Q. Did you use any of the company's time, money, or material in making this invention?

A. Their material all goes into that; every one — those boxes that went on was made of their material.

Q. Undoubtedly; but I mean in working up and getting this invention?

A. The first one do you mean?

Q. Yes, sir; the first one.

A. Well, I don't know.

Q. They don't use any yeast powders, do they?

A. Well, I don't know. I picked up an old tin cup; might have got it there; I don't remember where I got it. It was nothing but a piece of wood with a hole bored in it.

Q. You don't know whether that belonged to the company or not?

A. Well, I don't know. I guess it must have belonged to them; found it around their shops.

Q. Did you take any of the company's time in getting up this thing?

A. Oh, I guess I made that box in the company's time, undoubtedly, because it was during the company's time that the box was made.

24 Q. Did the company employ you to make inventions?

A. No, sir; they don't employ me for inventing.

Q. Did any one belonging to the company or connected with the company give you the idea upon which you based this invention?

A. No, sir; I studied that out myself.

Q. Did you neglect any of your other duties in order to get up this cup?

A. No; I don't know that I did.

Q. Well, if you had done so you would have known it, would you not?

A. Well, the other duties—my duties are to look after the work that is around, and as a matter of course I am not supposed to be working at the bench at all; I am from one shop to another.

Q. Did you neglect any of the company's work in order to apply your mind to this device?

A. No, sir.

REUBEN MUNRO was called on behalf of the plaintiff and testified as follows:

Mr. BOONE:

Q. Mr. Munro, are you the party named in this letters patent as the joint inventor with Mr. Lyon of the lubricator in suit?

A. Yes, sir.

Q. What is your business?

A. Well, I am a wood-worker in the car-repairing department of the Market St. Company.

Q. How long have you been engaged there?

A. A little over six years.

Q. Do you know, Mr. Munro, when it was that this oil cup was first put on the Hayes St. line?

A. Well, I think it was in June or July, 1886; I think it

25 was at that time—at the time the road started, anyhow.

Q. June or July, 1886?

A. I think we tried to get the road started for July, 1886; I think it was what they were pulling for at that time—somewheres near that time.

Q. Do you know how many of those cups were put on the cars of that line at that time?

A. No; I do not. I did not work there very much myself. I was mostly at 28th St. and Valencia.

Q. Do you know whether or not any claim has been made for any royalty or any recompense for the use of that cup on the lines of the defendant?

A. I don't think there has been any demand made.

Q. Did you ever make any demand?

A. No, sir; I did not.

Q. Did you ever make any claim?

A. Well, what would you call claim?

Q. Did you ever say to any one that you wanted——

A. Yes, sir; I have said to any one. I never said to an official of the company. I have not got that privilege, you know, of approaching them.

Q. You have not the privilege of approaching them?

A. No, sir; Mr. Lyon is the highest I can get; he is my boss.

Q. Did you ever give the Market St. road a license or a right to use this cup?

A. No, sir.

Q. Did you expect to obtain any royalty from it or to be paid for its use?

A. Most assuredly; yes, sir.

Q. Have you ever received any pay or remuneration for it?

A. No, sir.

26 Q. Ever received any increase in salary?

A. No, sir.

Q. Ever received any extra privileges from the road on that account?

A. No, sir.

Cross-examination.

Mr. Booth:

Q. You say, Mr. Munro, that you never made any demand upon the company for any remuneration for the use of this oil cup?

A. I never did.

Q. Did you know of the use of it on the cars?

A. Yes, sir.

Q. From the begin-ing?

A. Yes, sir.

Q. What, if anything, did you have to do with the placing of them on the cars? Did you put any of them on the cars?

A. Well, I presume likely I have. I could not say for certain. I do most everything; do some iron-work—that would come under the head of iron-work—but carpenters are supposed to do most any-

thing that comes along. I think I have supplied them to the cars—a few of them.

Q. Were you in the employ of the company at the time you made this invention?

A. Yes, sir.

Redirect examination.

Mr. BOONE:

Q. Did you take any of the company's time in making this invention?

A. I don't think I did.

Q. Take any of their money?

A. No, sir.

Q. Take any of their materials?

A. Well, the experiments, of course, were all made with materials.

Q. The experiments were made with materials?

A. The experiments were made with materials.

27 Recross-examination.

Mr. BOOTH:

Q. Well, the cups were made with their materials, were they not?

A. Yes, sir; all the cups that they used were made from their own material.

Q. Well, in experimenting with these, where did you conduct the experiments?

A. Experimented in different houses.

Q. During the course of the day?

A. Yes, sir.

Q. Then you did experiment in the time of the company, did you not?

A. Well, the invention, as I understood Mr. Boone—I do not understand that the invention—that it was on their time at all. The experiments were made during the ten hours.

Q. Did you hear Mr. Lyon testify that he came to you and that he talked to you about it and that you suggested this gauge?

A. Yes, sir.

Q. Where were you when you made this suggestion; do you remember?

A. I was on 28th St. at that time.

Q. At 28th St.?

A. At 28th St. and Valencia.

Q. Do you mean that you were living there?

A. I was working there.

Q. What is there at 28th and Valencia?

A. That is a car-house of the Valencia St. line.

Q. And did you think of this difficulty right then?

A. Well, I think he was talking about it one day and was work-

ing there, and we counseled together a good deal—have talked a great deal in regard to such matters, and it might have been the next day that I suggested that idea—might have been.

28 Q. Did he call on you at your house about it?

A. Yes, sir.

Q. All the interviews that you had with him were during business hours, were they?

A. Yes, sir.

Defendant called H. D. MORTON, who testified as follows:

Mr. BOOTH:

Q. Were you ever connected with the Market St. Cable Railway Company?

A. Yes, sir.

Q. When?

A. From the 22nd of February, 1885, to July 1st, 1887.

Q. In what capacity?

A. Superintendent.

Q. Had you any knowledge of this oil cup? If so, state what.

A. No, sir; not for that oil cup in particular.

Q. Of an oil cup like it?

A. The only thing that I can remember in regard to that was there had been an oil cup brought to my attention, a different kind of an arrangement to that altogether. Mr. Lyon at that time was foreman of the car repairs, and he spoke to me in regard to a cup that could be got up very cheaply, with a wooden plug and a screw; a combination of a tin cup on the outside. If my memory serves me right, he asked permission to try it on one of the cars, which was granted to him. After that I believe we ordered several of the tin cups. I don't remember anything further than that in regard to his conversation with me.

Mr. BOONE: No questions.

Being recalled, witness MORTON testified further as follows:

Mr. BOOTH:

Q. You are the gentleman who testified yesterday that you were formerly superintendant of the Market St. Cable Railway Company?

A. Yes, sir.

29 Q. You testified also that Mr. Lyon asked your permission to put a certain oil cup on the cars, and you gave it?

A. Yes; to the best of my recollection. It was a long time ago.

Q. What, if anything, did you hear about that lubricator having been patented?

A. Do you want to know when I first heard about the patented oil cup or whether I heard?

Q. Did Mr. Lyon tell you it was patented?

A. No, sir.

Q. Did you know it was patented?

A. No, sir.

Q. When did you first know—did you ever acquire any knowledge that it was patented?

A. Not up to within a month ago; not as long as that.

Cross-examination.

Mr. BOONE:

Q. Mr. Lyon told you it was his invention?

A. Nothing was said about an invention at all. It was simply put on, as we were all working for the interest of the Market St. Cable Railway Company. There were a great many improvements by the mechanics and different people to further their interests. This was an addition to save oil on the cars. That is the way it was understood at that time.

Q. He told you he got up the cup to feed oil for the journal of the cars?

A. It is simply a suggestion to put this cup on.

Q. That was when he got the privilege to put it on the Hayes St. line?

A. I don't remember what line it was. It was to work out an idea of his; that was the whole sum and substance of it.

Counsel for the defendant put in evidence, to show the prior state of the art and also to show an anticipation of the patent sued on, the following Patent Office copies of letters patent of the United States, namely:

No. 44407, bearing date September 27th, 1864, granted to Dickenson and Nelson for car-axle box; marked "Defendant's Exhibit 3."

No. 80333, bearing date July 28th, 1868, granted to S. Charnley for lubricator; marked "Defendant's Exhibit 4."

No. 183,606, bearing date October 24th, 1876, granted to J. Vair for oil cup; marked "Defendant's Exhibit 5."

No. 247,057, bearing date September 13th, 1881, granted to G. C. Herrich for oil cup; marked "Defendant's Exhibit 6."

No. 258,049, bearing date May 16, 1882, granted to J. E. Gilligan for oil cup; marked, "Defendant's Exhibit 7."

No. 267,584, bearing date November 14th, 1882, granted to J. C. Pinkney for oil cup; marked "Defendant's Exhibit 8."

No. 293,237, bearing date February 12th, 1884, granted to R. A. Fisher for oil cup; marked "Defendant's Exhibit 9."

No. 297,483, bearing date April 22nd, 1884, granted to J. E. Worswick for oil-cup feeder; marked "Defendant's Exhibit 10."

No. 346,205, bearing date July 27th, 1886, granted to F. Humphrey for oil cup; marked "Defendant's Exhibit 11."

Copies of said exhibits are hereto attached.

After the testimony was closed and before the court instructed the jury counsel for defendant made a motion that the court direct the jury to return a verdict for the defendant on the ground that the patent sued on is void for want of patentable novelty.

Counsel for both parties argued the motion, and upon the conclusion of the argument the court took the motion under advisement. Thereupon counsel for both parties handed to the court written instructions, which they requested should be given to the jury.

31 The court, having considered the motion made by defendant's counsel, as above stated, overruled it, and counsel for defendant duly took an exception, which the court allowed.

Counsel then proceeded to argue the case to the jury, and upon the termination of the argument, and the court having instructed the jury, counsel for defendant, before the jury retired, took an exception to the refusal of the court to give to the jury instruction No. 1 of the instructions handed by him to the court as aforesaid and requested to be given, and said exception was allowed by the court.

Instruction No. 1, above referred to, was as follows:

"If you believe from the evidence that Benjamin W. Lyon and Reuben Munro were at the time they made this invention in the employ of the defendant, and that they constructed or acquiesced in the construction of the car-axle lubricators used by the defendant while in its employ in its time and at its expense, and that they put them or allowed them to be put upon defendant's cars and allowed them to be used, no compensation being paid or demanded, then I charge you that these facts fully justify the presumption of and of themselves constitute an applied license to the defendant to use and to continue to use said car-axle lubricators, and you will return a verdict for the defendant."

The portion of the charge of the court to the jury having bearing upon the matter of the second exception, hereinafter stated, and having any reference to the relations of employers and employees with regard to patented inventions is as follows:

"If a person who is in the employ of another makes an

32 invention while in such employ and secures a patent, that fact does not make the invention the property of the employer; neither does such fact of itself give the employer any right to make, use, or sell the invention. If a person who has made an invention permits any other person to use any of the invented devices before he applies for a patent for the invention, such permission is a license to the person so using it to continue using the specific article after the patent issues and until the article is worn out, but it gives no right to make or use any other. Therefore, in this case, if the jury find that the inventors of the lubricator in question permitted the defendant to use certain oil cups on their cars before they applied for a patent, the defendant would be entitled to use those specific oil cups until they were worn out, although such use continued after the issuance of the patent, but the defendant would not thereby have any right to make or use other similar oil cups to supply the places of those specific cups after the specific ones referred to were worn out or removed, and if the defendant did replace such specific oil cups after the patent was applied for or made or used any other

similar cups on any of its other cars such manufacture and use would be an infringement upon the right granted by the patent.

An experimental use for the purpose of testing an invention is not such a use prior to the application for a patent as will imply a license; consequently, if the jury find in this case that the inventors merely obtained permission from the defendant to test their axle lubricators on its cars, and that the inventors simply applied their lubricators on said cars for the purpose of testing their practibility, such a use by them prior to their application would
33 not imply any license whatever. The patentees were not bound to demand any license fee from the defendant before commencing suit nor to give them any notice that they wanted pay for the use of the lubricators; neither were the patentees bound to commence suit against the defendant within any specified time. The patent guarantees to them exclusive right, privilege, and license to make, use, and sell the patented lubricator for a period of seventeen years from its date. Such patent is an open letter and the public and individuals are bound to take notice of it. The patent makes no limitation on this right, and the owner of the right can use it as he pleases and prosecute infringers at any time."

First exception.

After the motion of defendant's counsel that the court direct the jury to return a verdict for the defendant on the ground that the patent sued on is void for want of patentable novelty had been argued, the court overruled the motion, and the defendant's counsel took an exception to the order overruling his motion; which exception the court allowed.

Counsel for defendant thereupon tendered to the court this his bill of exceptions to sign and seal, and the court did thereupon sign and seal the same.

Second exception.

After the court had given its instructions to the jury and before the jury had retired the following proceedings were had:

"Mr. Booth: Before the jury retires I wish to take exception upon one point only, and that is the failure of your honor to give the jury the instruction No. 1 of the copy which I have filed with the court.
34 "The Court: Note the exception."

Counsel for defendant thereupon tendered to the court this his bill of exceptions to sign and seal, and the court did thereupon sign and seal the same.

The jury then retired, and upon returning brought in a verdict for the plaintiff.

And now, in furtherance of justice and that right may be done, the defendant presents the foregoing as his bill of exceptions in

said case, and prays that the same may be settled and allowed and signed and certified by the judge as provided by law.

San Francisco, California, April 13th, 1891.

WM. F. BOOTH,
Attorney for Defendant.

The foregoing bill of exceptions is correct.

JNO. L. BOONE,
Attorney for Plaintiff.

The foregoing bill of exceptions is correct and is hereby settled and allowed.

THOMAS P. HAWLEY,
U. S. Judge.

36 UNITED STATES PATENT OFFICE.

BENJAMIN W. LYON and REUBEN MUNRO, of San Francisco, California.

Car-axle Lubricator.

Specification forming part of Letters Patent No. 365,754, dated June 28, 1887. Application filed January 29, 1887. Serial No. 226,042. (No model.)

To all whom it may concern:

Be it known that we, Benjamin W. Lyon and Reuben Munro, citizens of the United States of America, and residents of the city and county of San Francisco, State of California, have invented new and useful improvements in automatic top-feed lubricators for railroad-car axle-box bearings, of which the following is a full, clear, and exact description, referring to the accompanying drawing.

(Here follows diagram marked p. 35.)

Our object, which we obtain in our car-axle lubricator, is to prevent the oil from dripping on the axle when the car stands still, and to feed the oil to the axle and bearing whenever the car moves and jolts. These objects we obtain by the devices and mechanism hereinafter described and set forth.

The figure is a vertical elevation of our car-axle lubricator.

Through the car-axle box and bearing A we bore a suitable hole, and provide the same with suitable screw-thread for screwing therein the oil pipe or channel B. This pipe is threaded at both ends, and the upper end of pipe B is screwed to wooden disk D, which forms the bottom of the oil-cup, and to which the sides F are firmly screwed. We prefer to close our oil-cup with a tight-fitting cover, G. The inner top edge of the pipe or channel B is beveled to a suitable angle for the purpose of giving a suitable closing-surface for the head of the plug or stopper C. We prefer to make the stopper C of the shape as shown in the drawing; but we do not confine ourselves to that shape or form, as any other suitable shape may effect the same result.

To the oil-cup we properly secure a suitable adjustable gage, E, and placed over the plug or stopper C. This plug is stoppering up the pipe B, and prevents the oil from flowing down the pipe when the car is not in motion, while a gage is provided for the purpose to prevent the plug from rising too far when the car jolts, and the distance between the gage and the top of the plug is spaced or regulated by the gage. For instance, a large space will admit the plug to rise sufficiently when the car jolts to obtain thereby a large flow of oil for the bearing and axle, while a smaller space between the gage and the plug admits of a corresponding smaller flow of oil.

(No Model.)

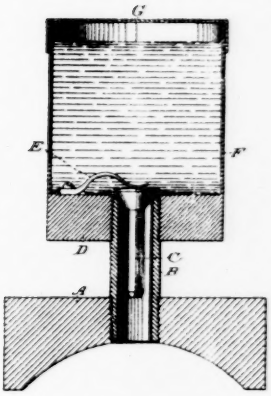
B. W. LYON & R. MUNRO.

CAR AXLE LUBRICATOR.

No. 365,754. Patented June 28, 1887.

No 161
Market St
Railway Co
Rowley
p 35

Fig. 1.



Witnesses:
E. H. Brandau
Ferdinand Amhorst.

Inventors:
B. W. Lyon
Reuben Munro
By their Att'y
Alexander Gaud

We do not confine ourselves to the shape or form of the gage as shown in the drawing, as any other suitable device by which the gaging of the rise for the plug or stopper is effected will answer our purpose.

In operating our car-axle lubricator we fill the oil-cup with oil, and when the car jolts then the plug or stopper C jolts and rises also, whereby an opening between the head of the plug or stopper C and the pipe B is made for the oil to pass through and down the pipe or channel and upon the car-axle, lubricating the same and the bearing.

We do not confine ourselves to the shape of the oil-cup, as described, as any other oil cup may be changed readily to admit of the use and application of our stopper and gage.

Having thus fully described our invention, what we claim, and desire to secure by letters patent, is—

In a car-axle lubricator, the combination, with the axle-bearing A, of the oil-cup F, connected thereto by means of the screw-threaded pipe B, stopper or plug C, located in the channel of said pipe, and gage E, limiting the upward movement of said stopper or plug, substantially as set forth.

BENJ. W. LYON. [L. S.]
REUBEN MUNRO. [L. S.]

Witnesses:
FERDINAND IMHORST.
A. B. SMITH.
CHARLES F. GOMPERTZ.

11201. Pl'ff's Ex. A.

39 UNITED STATES PATENT OFFICE.

E. S. DICKINSON and WILLIAM D. NELSON, of New York, N. Y.

Improvement in Journal-boxes.

Specification forming part of Letters Patent No. 44407; dated September 27, 1864; antedated September 18, 1864.

To all whom it may concern:

Be it known that we, E. S. Dickinson and William D. Nelson, both of the city, county, and State of New York, have invented certain new and useful improvements in journal-boxes for the axles of railroad cars; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

(Here follow diagrams marked pp. 37 & 38.)

Figure 1 is a vertical section of our invention, taken in the line *x x*, Fig. 2; Fig. 2, a vertical section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists, first, in constructing and casting the box in two separate and distinct parts, and in such a manner as to admit of said parts being fitted together and secured by two bolts, which do not pass through the interior of the box, whereby the box, when the two parts are secured together, is rendered oil-tight, the waste of oil in the ordinary journal-boxes, caused by the leakage of the same through the bolt-holes, being entirely obviated.

The invention consists, secondly, in an improved packing to prevent the escape of oil from the box around the axle, and also to prevent the admission of dust into the box, said packing consisting of a metal plate provided with a bushing of soft metal to fit upon the axle, the plate being fitted loosely in grooves at the rear of the box, and arranged in such a manner as to admit of the box, under the wear of the journal, to settle freely, while the packing will remain fitted snugly on the axle without being subjected to any undue pressure or wear.

The invention consists, thirdly, in the self-operating lubricating-valve placed in an oil-chamber within or at the upper part of the box, and so constructed and arranged as to admit oil in suitable quantities down upon the journal, whereby the latter will always be supplied with pure oil, and much wear of the journal avoided.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A B represent the two parts of the box, A being the upper and B the lower part. These two parts are cast separately, and the lower

2 Sheets—Sheet 1

DICKINSON & NELSON

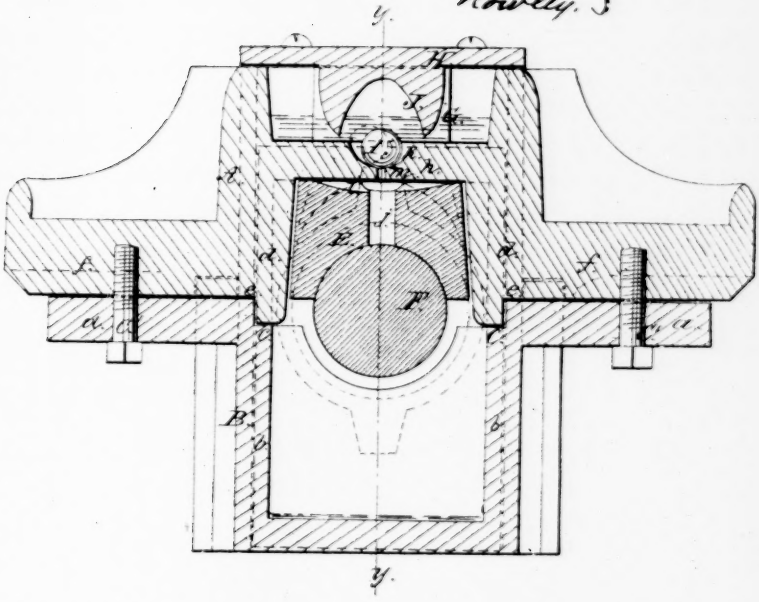
Car-Axle Box.

No. 44,407.

Patented Sept. 27, 1864.

No. 161.
Market St.
Railway Co.
v. Rowley.
p. 37

Fig 1



Witnesses:

Thos. F. Douglas

Geo. H. Reed

Inventor:

O. S. Dickinson

Wm. D. Nelson

2 Sheets—Sheet 2

DICKINSON & NELSON

Car-Axle Box.

No. 44,407.

Patented Sept. 27, 1864.

No. 161,
Market St. Ry. Co.
v.
Rowley.
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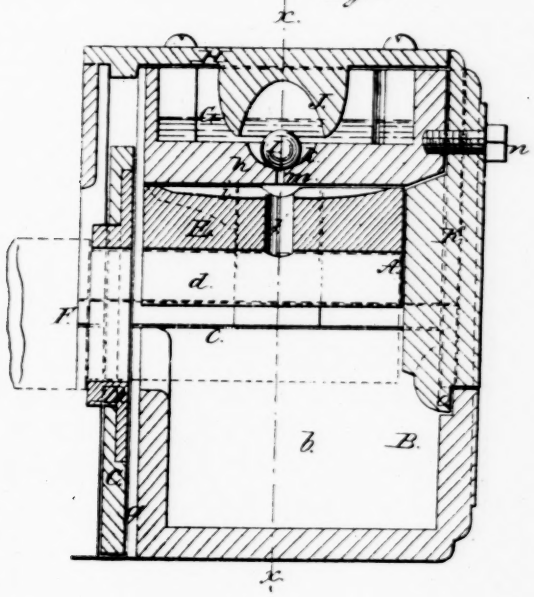
Fig. 2



Witnesses:

Thos. J. Douglas.

Geo. A. Reed

Inventor.

D. L. Dickinson.

Wm. D. Nelson.

part, B, has an ear or horizontal projection, *a*, cast at two opposite sides, *b b*, and there is a recess in the upper edges of said sides to form a shoulder, *c*, at the inner surfaces of the sides *b b*, the shoulders extending the whole length of the sides *b b*, as shown in Fig. 2. The lower edges of the sides *d d* of the upper part, A, of the box have similar recesses cast in them to form shoulders *e e*, the latter being at the outer surfaces of the sides *d d*. The part A of the box has an ear or projection, *f*, cast at each side of it, and when the two parts of the box are in contact the ears or projections *f* rest upon the ears or projections *a*, and the lower edges of the sides *d d* of the upper, A, rest upon the shoulders *c* at the inner surfaces of the sides *b b* of the part B, while the upper edges of the sides *b b* bear against the shoulder *e* at the outer surfaces of the sides *d d* of the part A, the two parts being held firmly in contact by bolts C', passing through the ears or projections *a* into the ears or projections *f*. (See Fig. 1.) By this arrangement the two parts of the box will be firmly connected by an oil-tight joint, and without any apertures or openings through which oil can escape from the box. In the ordinary boxes, the parts of which are connected together by bolts passing through the box, oil is liable to escape around the bolts through the bolt holes—a contingency which cannot occur in our invention, as the connecting-bolts are at the outer side of the box. The ears or projections *f* of the upper part, A, of the box are at their upper sides, are of socket form (see Fig. 1), and receive the supports or pedestals of the car. At the rear of the box, in the inner surfaces of the sides *b d* of the two parts A B, there are vertical grooves *g g*, which receive the edges of a metal plate, C, said plate being fitted loosely in the grooves *g*. In this plate C there is made an opening which receives an annular collar or bushing, D, constructed of any soft metal or composition similar to that of which bearings for shafts are made. Brass or Babbitt metal would answer.

E is the bearing, which is placed within the upper part, A, of the box, and bears against the under side, *h*, of the top of the same, as shown clearly in Fig. 2. The upper surface of the bearing is grooved both longitudinally and transversely, as shown at *i*, and has a vertical hole, *j*, made centrally through it, as shown in both figures. The journal F of the axle passes through the collar or bushing D, the plate C serving to prevent the passage of dust into the journal-box and the escape of oil therefrom, while the box is allowed to descend, under the wear of the bearing and journal, without at all affecting the plate C, which always remains loosely on the journal, the box being allowed to move vertically, on account of the plate C being fitted loosely in the grooves *g g'*. By this arrangement a durable and self-adjusting packing-plate is obtained at the rear end of the journal box, and one that may be very readily repaired when necessary, for the collar or bushing D, when worn away, may be replaced by a new one with the greatest facility. The front side of the journal-box is provided with a door or plate, K, secured to it by a bolt, *n*, and lip or flange *o*. (See Fig. 2.)

In the top of the upper part, A, of the journal-box there is an oil-chamber, G, having a top plate, H, screwed closely down upon it, to

prevent the admission of dust. The bottom of this oil-chamber forms the top *h* of the portion of A of which the bearing E is placed, and in the upper surface of *h*, at its center, there is made a semi-spherical recess, *k*, in which a ball, I, is placed, the recess *k* being sufficiently large to admit of a certain degree of play or movement of the ball. At the center of the recess *k* a hole, *m*, is made through the bottom of the oil-chamber, said hole being in line with the hole *i* in the bearing E. (See both figures.) The under side of the top plate, H, of the oil-chamber is cast with a pendent socket, J, which is concentric with the recess *k* and retains the ball I therein, as will be understood by referring to both figures. The ball I performs the office of a valve, closing the hole *m* when the car is stationary; but when the car is in motion the ball or valve I will have a lateral movement or play imparted to it, so as to admit of a gradual flow of oil down through the hole *m* into the grooves *i* in the upper surface of the journal F and through the hole *j* in the bearing to the journal F. By this arrangement it will be seen that the journal F will be gradually supplied with oil as required, and as the same oil is not used repeatedly or over and over, as is the case with the ordinary journal-boxes, the journal and bearing will not become worn or cut by the impurities, as is now the case to a greater or less extent. The oil passes or drops from the journals F into the lower part, B, of the box, and cotton waste, or other material may be placed in B to absorb the oil which drops from the journal. It is not designed, however, to have this waste come in contact with the journal.

Having thus described our invention, what we claim as new, and desire to secure by letters patent, is—

1. The employment or use in a journal-box for car-axles, of an oil-chamber provided with a valve, I, so constructed and arranged that said valve will, under the motion of the car, oscillate or roll so as to intermittingly open and close the oil-passage and gradually supply the journal with oil and keep it in a properly lubricated state.

2. The combination of the two parts, A B, projecting ears or flanges *a f*, screws C', and shoulders *e* and *c*, when the said parts are constructed and arranged as herein described, and operate in the manner and for the purposes specified.

3. The packing-plate C, fitted in the rear of the journal-box and provided with the collar or bushing D, substantially as and for the purpose herein set forth.

E. S. DICKINSON.
WM. D. NELSON.

Witnesses:
THOS. S. J. DOUGLAS.
GEO. W. REED.

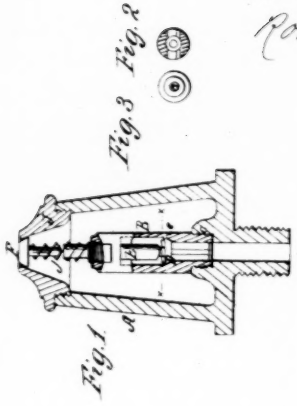
11201. Def't's Ex. 3. L. S. B. S.

S. Charnley.

Lubricator.

No 80,333. Patented July 28, 1868.

No 161.
Market St
Ry Co
v
Rowley
} to 40



Witnesses,
Wm A Mc Organ
S. C. Jones

Inventor;
S Charnley
per Munn & Co
attorneys.

41 UNITED STATES PATENT OFFICE.

SYLVESTER CHARNLEY, of Portage City, Wisconsin.

Letters Patent No. 80333, dated July 28, 1868.

Improved Oil-cup.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Sylvester Charnley, of Portage City, in the county of Columbia, and State of Wisconsin, have invented a new and improved oil-cup; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

(Here follows diagram marked p. 40.)

This invention consists in so arranging a valve in an oil-cup that it can be raised by the motion of the part to which the cup is attached, and closed by its own gravity, so that the discharge of the oil will depend upon the rapidity of the motion up and down, as will hereinafter be more fully described.

The drawing (figure 1) represents a vertical central section of an oil-cup constructed according to my invention.

Figure 2 represents a cross-section through the line *x x*.

Figure 3 is a view of the bottom end of the valve-cage, showing the end of the valve-stem.

Similar letters of reference indicate corresponding parts.

A is the cup which screws into the connecting-rod or pitman of an engine over the journal, so that it may have a rapid up-and-down motion.

B is the valve-cage, which screws into the bottom of the cup, as seen at *c*.

D is the valve, which has its seat in the cage, as seen at *e*.

The valve-stem is triangular in form, as seen in Fig. 3, so that the apertures will allow the oil to descend.

E is a regulating-screw, which works through the top of the cage, and which controls the movement of the valve.

By turning this screw up or down, the valve will be allowed to rise more or less, and consequently feed the oil faster or slower.

F is a valve, which is pressed upward against the inner side of the aperture in the cup by a spring, *g*.

Oil may be introduced through this orifice by pressing down the valve.

By removing the cap of the cup J, the cage and valve may be readily taken from the cup.

The valve D being dropped loosely into its seat, will be raised from its seat at every revolution of the crank or wheel to which the wrist-pin or journal is attached.

The cup being attached to the connecting-rod over the wrist or journal, its motion will be governed thereby, while the valve, being loose in its seat, will be raised more or less at each revolution, and oil will be allowed to pass to the journal.

The quantity of oil thus distributed will depend upon the velocity of the motion and the amount of movement allowed the valve.

I claim as new, and desire to secure by letters patent—

The valve D, having a triangular stem, (as shown in Fig. 3), the regulating-screw E, valve F, spring *g*, and cage B, when arranged in an oil-cup, substantially as described, for the purposes set forth.

SYLVESTER CHARNLEY.

Witnesses:

WILLIAM MacKAY.
JAMES MITCHELL.

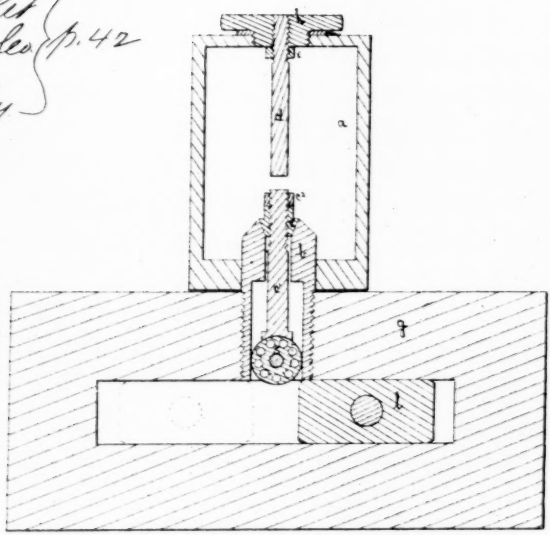
11201. Def't's Ex. 4. L. S. B. S.

J. VAIR.

OIL-CUPS.

No. 183,606. Patented Oct. 24, 1876.

No. 161
Market
St Ry Co
to
Rowley
p. 42



Witnesses
George F. Robinson
S. G. Siddall

Inventor
James Vair
by Bradford Howland
his Attorney.

43 UNITED STATES PATENT OFFICE.

JAMES VAIR, of Ravenna, Ohio.

Improvement in Oil-cups.

Specification forming part of Letters Patent No. 183,606, dated October 24, 1876; application filed September 22, 1876.

To all whom it may concern:

Be it known that I, James Vair, of Ravenna, Portage county, Ohio, have invented a new and useful improvement in oil-cups, of which the following is a specification:

The object of my invention is to lubricate the guides and cross-heads of locomotives and similarly-operating machinery in such a manner that the oil will flow only when the machinery is in operation, and the quantity of its flow will be regulated by the speed of the machinery.

Figure 1 represents a vertical section of the device.

(Here follows diagram marked p. 42.)

In the bottom of the oil-cup *a* the hollow standard *b* is firmly inserted. The lower end of the standard *b* is threaded and screwed through a hole in the top of the guide *g*. The valve *c* is shaped like an inverted cone, and its seat in the top of the standard *b* is shaped to fit it. The outside of the top of the standard *b* slopes downward, so as to prevent any dirt or sediment in the oil from entering or settling between the valve *c* and its seat. The upper part of the valve-rod c^1 is threaded, and there is a corresponding female thread in a hole through the valve. The upper end of the valve *c* does not enter the valve-seat, and is shaped like a nut, so that the valve may be screwed on the valve-rod c^1. The set-screw c^2 is screwed on the valve-rod c^1, against the top of the valve, to hold it in position. The valve-rod c^1 extends downward through the hollow standard *b*, and in the lower end is placed the roller *s*. The valve *c* is adjusted on its rod c^1, so that the bottom of the roller *s* will project slightly beneath the lower side of the upper part of the guide *g*. Each end of the cross-head *l*, in its reciprocating motion in the guide *g*, alternately strikes the roller *s*, and lifts it and the valve *c*, and when the cross-head *l* has passed the roller *s* the valve *c* falls again into its seat. The cover *h* is screwed in the top of the oil-cup *a*, with packing *m* between the cover and the top of the oil-cup, to make it air-tight. The oil-cup should not be quite filled with oil, but a space should be left for air. When the valve and its rod are raised by the cross-head *l*, the air in the oil-cup is proportionately compressed, and thereby the oil is forced downward along the rod c^1, through the hollow standard *b*, onto the roller *s*, by which it is distributed on the cross-head *l*. As the oil is forced downward only when the roller *s* is raised by the end of

the cross-head *l*, a sufficient quantity of oil will flow down the ends of the cross-head to lubricate its lower side. When in rapid motion the stroke of the cross-head against the roller *s* will throw it above and off the cross-head, and thereby increase the quantity of oil forced from the cup at each stroke. This quantity is regulated by the adjustment of the stop *d*, against the lower end of which the valve *e* strikes when the valve is thrown up. The stop *d* is adjusted by screwing it up and down in the cover *h*. The set-nut *i* on the threaded part of the stop *d* is used to hold the stop firmly in position by screwing the set-nut *i* against the under side of the cover *h*. There are holes through the roller *s* from side to side, to hold oil. As the oil flows down on the roller these holes become filled with it and enable the roller to more evenly distribute the oil on the cross-head. The roller *s* is revolved by the cross-head passing under it, and therefore does not scrape the cross-head or push the oil before the roller, but evenly deposits it on the upper side of the cross-head. The upper side of the cross-head is slightly inclined at the ends, so as to more easily lift the roller *s*. The reciprocating motion of the valve *e* and its rod in the oil-cup tends to prevent the oil from congealing, and when the cross-head is at rest the flow of oil nearly or quite ceases, because it is only forced from the oil-cup by the upward movement of the valve *e* and its rod. The stroke of the cross-head against the roller *s* is adjusted by turning the valve *e* on its threaded rod e^1, and thereby raising or lowering the roller *s*.

I claim as my invention—

The roller *s*, in combination with the valve *e*, substantially as described.

JAMES VAIR.

Witnesses:

BRADFORD HOWLAND.
GEO. F. ROBINSON.

11201. Def't's Ex. 5. L. S. B. S.

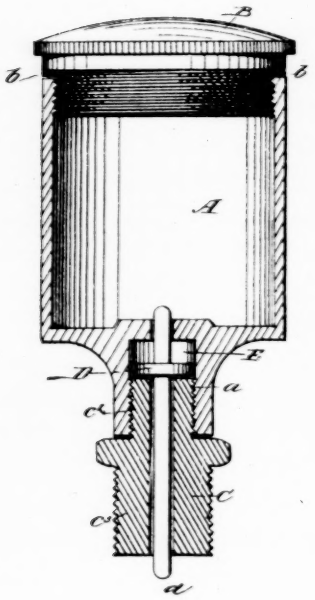
(No Model.)

G. C. HERRICH.

OIL CUP.

No. 247,057. Patented Sept. 13, 1881.

No 16 Market St Ry. Co
to
Rowley
p 44.



WITNESSES:
Francis M. Austin
C. Sedgwick

INVENTOR:
G. C. Herrich
BY Munn & Co
ATTORNEYS.

45 UNITED STATES PATENT OFFICE.

GEORGE C. HERRICH, of Auckland, New Zealand.

Oil-cup.

Specification forming part of Letters Patent No. 247,057, dated September 13, 1881. Application filed August 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, G. Charles Herrich, of Auckland, New Zealand, have invented a new and useful improvement in oil-cups, of which the following is a specification.

My invention consists in a novel construction, arrangement, and combination of an oil-cup and a valve and devices pertaining to the same, whereby the oil is supplied to the bearing intermittently, as hereinafter particularly described.

The accompanying drawing represents a vertical sectional view of my invention.

(Here follows diagram marked p. 44.)

A is the oil-cup, which is of cylindrical form, and is provided with a screw cap or cover, B. If desired, a leather washer, *b*, may be interposed between the cup and the cover to render it air-tight.

At the bottom of the oil-cup is an extension or neck, *a*, which is internally screw-threaded to form a socket for the reception of a plug, C. This plug is provided with a thread, c^2, for engagement with the socket, and another thread, c^3, for engagement with a threaded socket or recess in the bearing to which the oil-cup is to be applied.

In the center of the plug C is a longitudinal bore extending the entire length of the plug, and in the bottom of the oil-cup is an orifice of corresponding size and in line with the bore of the plug. In this bore and this orifice works a rod or stem, *d*, which is small enough to allow oil to flow around it, as hereinafter described. The stem *d* carries a piston, D, which works, after the manner of a puppet-valve, in a chamber, E, formed by the space between the bottom of the oil-cup A and top of the plug C.

The cup being applied to the bearing by inserting the threaded portion c^3 in a socket provided for it, the piston or puppet-valve D rises and falls by the motion and vibration of the machinery, and thus allows the oil to flow intermittently from the cup around the piston and stem and down through the bore of the plug to the bearing.

If desired, the valve-stem *d* may extend below the bottom of the plug, as shown, so as to touch the shaft which works in the bearing; and in some cases there may be projections on said shaft to

strike the stem at regular intervals and insure a degree of uniformity in the intermittent feed of the oil.

Having thus described my invention, I claim as new and desire to secure by letters patent—

The combination, with the oil-cup A, of the tubular plug C, piston or puppet-valve D, and chamber E, as shown and described, for the purpose specified.

GEORGE CHARLES HERRICH.

Witnesses:

THOMAS S. WEBB,
J. P., Kopara.
ALFRED WEBB,
Farmer, Kopara.

11201. Deft's Ex. 6. L. S. B. S.

(No Model.)

J. E. GILLIGAN.

OIL CUP.

No. 258,049. Patented May 16, 1882.

No 161. Market St. Ry Co p 46 J Rowley

Fig 1.

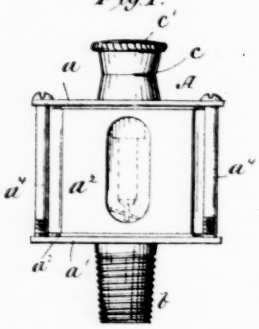


Fig 2.

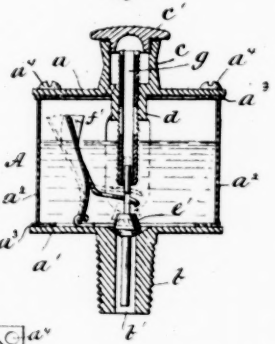


Fig 6.

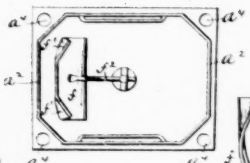


Fig 3.

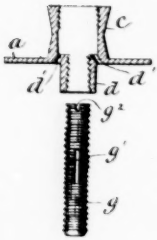


Fig 4.

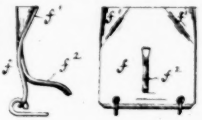
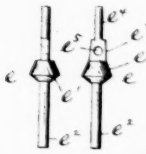


Fig 5.



Witnesses.
P. B. Turpin
F. W. Wheat

John E. Gilligan Inventor
By R. S. & A. P. Lacey
Attys.

47 UNITED STATES PATENT OFFICE.

JOHN E. GILLIGAN, of Elko, Nevada.

Oil-cup.

Specification forming part of Letters Patent No. 258,049, dated May 16, 1882. Application filed March 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. GILLIGAN, a citizen of the United States, residing at Elko, in the county of Elko and State of Nevada, have invented certain new and useful improvements in oil-cups; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention has for its object to furnish an improved oil-cup; and it consists in the construction and arrangement of the several parts hereinafter described, and pointed out in the claims.

(Here follows diagram marked page 46.)

In the drawings, figure 1 is a front view, Fig. 2 a vertical section, and Figs. 3, 4, and 5 are detailed views, of parts of an oil-cup constructed according to my invention; and Fig. 6 is a plan view of same with top removed.

A is the casing, which I preferably make oblong shape, as shown. It is composed of the top plate, *a*, bottom plate, a', and side plate, a^2, the top and bottom and side plates having between them packing a^3, and clamped together by bolts a^4, as shown, to form a casing of a shape substantially as shown.

b is a tube extended down from plate a', and it is threaded on its outer side, so it may readily be connected to the journal or rod desired to be lubricated, as hereinafter set forth. The opening b' of this tube leading up into the casing *A* is countersunk at its upper end to form the valve-seat, in which rests the plunger-valve, as hereinafter set forth. From the upper side of the plate *a*, directly over the tube *b*, I project the tube *c*, the inner side of which, near its top, is threaded to receive the threaded cap c'. From the under side of the plate *a*, within the tube *c*, I extend the tube *d* down into the casing *A*. The inner side of the tube *d* is threaded, as shown. The tube *d* is smaller than the tube *c*, and through the plate *a*, within the tube *c*, I cut holes d', leading along the outer side of the tube *d* into the reservoir formed within the casing *A*, as shown.

e is the plunger. It is formed with the valve e', fitted to the seat formed in upper portion of opening b' through tube *b*, and the shank e^2 extended below the valve within the said tube, and ar-

ranged to act as a guide for the valve. Above the valve I construct the plunger, with the angular portion e^3 and the rounded portion e^4, the joint of the said portions forming a square shoulder, against which rests the regulating-pipe, hereinafter described. Through the angular portion e^3, I form the opening e^5, for the purpose to be hereinafter described.

f is the hinged operating-lever. It is formed of a thin plate made about as wide as the inner side of my casing the narrow way, and it is hinged at its bottom to the lower plate, a', so that it will tilt forward and back over its center. The upper corners, f', of this lever-plate I bend forward and form the plate into a sort of cup, so that the splashing of the oil, as hereinafter described, will have greater effect on the said lever in operating the device, as will be described. From the forward part of this lever I extend the rod f^2, which is passed through the plunger e, thus connecting the lever and the plunger, so that the motion of one will affect the other, as shown.

g is a tube threaded on its outer side and adapted to be screwed in the threaded opening through tube d, and rest with its lower end down over upper portion, e^4, of plunger e, and on the square shoulder formed at joint between rounded and angular portion of said plunger. About midway this tube I cut grooves g', leading into the inside of same, so that air can escape from the cup when oil is being poured in through the openings made for that purpose, as will be described. g^2 is a groove cut across top of groove g to give a hold for a screw-driver, so that the tube may be turned down into or up out of the cup.

In the operation of my invention it is properly screwed on a connecting-rod journal of crank-shaft or other part of a machine having a forward and back motion and requiring lubrication. The cap e' is then removed and oil is poured into the space around the tube g and through the openings g' into the cup, the air within the cup readily escaping through the tube g, and when the oil has risen above the lower end of said tube there is still exit therefor through slots g'. When the machine is at rest the operating-lever, valve, &c., will be in the position shown in Fig. 2, and the oil will be secured from passing out of the cup. When the machine is in motion and the portion carrying the cup has finished its forward stroke the momentum acquired, together with the throw of the oil against its broad surface, will throw the operating-lever back, raising with it the plunger, and the valve and oil escapes on the part where needed. Then, when quiet is restored, the lever falls to its usual place, carrying with it the valve, and the oil is again shut within the cup.

The lever f, having its corners f' bent, as shown, provides a surface against which the force of the oil acts with great power. The distance to which the lever may tilt and raise the valve, and consequently the amount of oil which may be deposited at each stroke of the machine, is regulated by the tube g, rested on the square shoulder on plunger, and being screwed up or down, as the amount of oil to be deposited is much or little.

In the side of the casing I provide openings covered with glass, so the amount of oil within the cup may be determined at a glance.

Having thus described my invention, what I claim, and desire to secure by letters patent, is—

1. The combination, with the plunger e, having valve e' and opening e^3, of the plate-lever f, hinged to the lower side of casing and bent into a cup-shaped form on the side next the body of the oil, and connected to the plunger by rod f^2, substantially as described.

2. The combination, substantially as hereinbefore set forth, of the plunger e, having valve e', the hinged lever f, connected to plunger e, and the regulating-tube g, threaded and arranged to bear against shoulder formed on plunger e, and provided with slots g', substantially as described.

In testimony whereof I affixed my signature in presence of two witnesses.

JOHN E. GILLIGAN.

Witnesses:

M. H. MILLER.
FRANK GRINER.

11201. Def't's Ex. 7. L. S. B. S.

49 UNITED STATES PATENT OFFICE.

CHARLES J. PINKNEY, of Cleveland, Ohio, assignor of one-half to Thomas Pinkney, of same place.

Oil-cup.

Specification forming part of Letters Patent No. 267,584, dated November 14, 1882. Application filed March 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, Charles J. Pinkney, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful improvement in oil-cups, of which the following is a specification.

The nature and objects of this improvement will fully appear from the subjoined description, when considered in connection with the accompanying drawing, in which the figure is a vertical section.

(Here follows diagram marked p. 48.)

This improvement consists in making a seat in the bottom of the cup over and leading into the discharge-opening in the supporting-stem, and employing a ball-valve for closing the same.

A is the bowl or body of the oil-cup, and is provided with a suitable cap or cover, B, and a neck or stem, C, by which it may be attached to the parts which it is intended to lubricate, the neck C having a vertical central opening, *c*. The junction of the said opening *c* with the bottom of the interior of the cup forms the valve-seat. The valve consists of a ball, D, which lies over the said opening *c*, and serves as a cut-off to the opening and prevents the passage of oil while the cup is at rest. The ball may be made of any suitable heavy material, preferably of glass.

The operation of this device is as follows: By the jarring of the ball, which is caused by the movements of the machinery to which the cup may be attached, the opening *c* is sufficiently uncovered to allow of the escape of small quantities of oil, sufficient for lubricating purposes.

This oil-cup is especially designed for lubricating the slides of locomotive-engines, the jarring of the ball by the movements of the locomotive being quite sufficient to allow the cup to discharge the required quantity of oil without waste. It is an economical oiler, for when the machinery is at rest there is no discharge of oil. It is not intended for lubricating cranks, cams, or connecting-rods, as the motions would be too great; but it is useful for all stationary slides, journals, and shafting, as the simple jarring of the ball caused by shaking or by the suction of the revolving journal allows the necessary supply of oil to escape for lubrication.

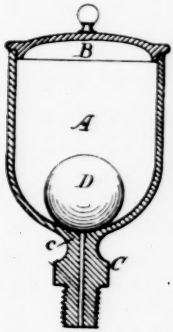
(No Model.)

C. J. PINKNEY.

OIL CUP.

No. 267,584. Patented Nov. 14, 1882.

No 161.
Market
St Ry Co
Rowley
M. 48



Witness;
M. G. Anton
F. W. Tibbitts

Inventor.
Charles J. Pinkney.
By Geo W Tibbitts Atty

I am aware that it is not new to make an oil-cup with an inner chamber having a rounded bottom and containing a ball which closes the feed-opening in the apex of the bottom; and that I do not claim. My device, however, differs from that, in that I dispense with the inner chamber and make the oil-cup proper with a rounded bottom. Therefore

What I claim as new is—

As a new article of manufacture, an oil-cup having an inner rounded base, which forms the bottom of the cup proper, a stem formed integral therewith and provided with a feed-tube terminating at the apex of the inner rounded bottom, and a ball-valve contained within the cup, and having the inner rounded base for a seat, and closing the feed-opening when the cup is at rest.

CHAS. J. PINKNEY.

Witnesses:

GEO. W. TIBBITTS.
E. W. LAIRD.

11201. Deft's Ex. 8. L. S. B. S.

51 UNITED STATES PATENT OFFICE.

ROBERT A. FISHER, of San Francisco, California.

Oil-cup.

Specification forming part of Letters Patent No. 293,237, dated February 12, 1884. Application filed June 22, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT A. FISHER, of San Francisco, in the county of San Francisco and State of California, have invented a new and useful improvement in oil-cups, of which the following is a specification.

The objects of my invention are to provide an oil-cup having a ball-valve which is operated in an automatic manner to open and close the oil-port, and also to limit the throw of the valve. These objects I accomplish by the means illustrated in the accompanying drawings, in which—

(Here follows diagram marked p. 59.)

Figure 1 is a vertical section of my oil-cup. Figs. 2, 3, and 4 are sections in elevation, showing the regulator or upper valve-seat, the lower valve-seat, valve, and feed-pipe of my oil-cup.

A is the body of my oil-cup, which may be made of any suitable metal, and thus do away with the expensive glass lining or cup within an open-sided metal body, now so largely in use to indicate the quantity of lubricant contained in the cup, since the quantity of oil for running a given length of time can be gaged to a certainty and none be allowed to run to waste. The cup is provided with the usual screw-cap or cover, B, and a neck or stem, C, by which it is attached to the machine which it is intended to lubricate, the neck or stem C having also the usual oil-passage. The bottom of the interior of the cup is hollowed out at D, to form a chamber and receive a portion of the ball-valve E, which provides a seat for the valve, and when the ball is at rest shuts down over the opening or oil-passage F. A screw-stem, G, passes through the cap or cover, and is provided at its lower end with a hemispherical chamber, H, and thus forms an upper seat for the ball-valve, and when in operation limits the upward movement or throw of the valve, so that the oil can only pass into the oil-passage during the vibrations of the valve between the two chambers or seats when the machinery is in motion. These hemispherical guide chambers or seats will also prevent the ball from rolling sidewise in turning curves on railways when the device is applied to locomotives, in which case a much larger quantity of oil will run out upon the parts and be wasted. It will thus be seen that the valve operates between two spherical chambers or seats, one of which is stationary in the bottom of the cup and the other movable within the end of the stem, which latter

(No Model.)

R. A. FISHER.

OIL CUP.

No. 293,237. Patented Feb. 12, 1884.

No. 161. Market St Ry. Co. v. Rowley. p. 50

FIG. 1.

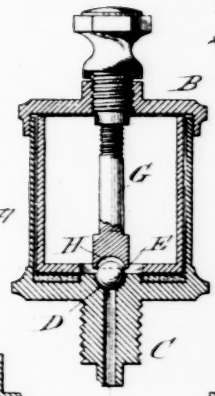


FIG. 2.

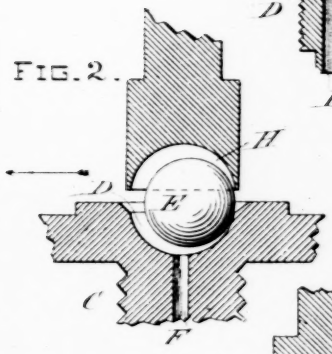


FIG. 3

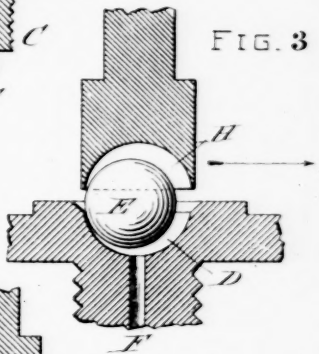
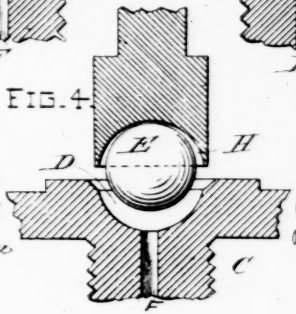


FIG. 4.



WITNESSES

Walter Bradford

John E. Sawtell

INVENTOR

Robert A. Fisher

By Church & Church

Attorneys.

can be so adjusted as to shut down over the ball-valve and limit its throw to the thirty-second of an inch, if necessary; and hence my invention differs from all others, as cranks, cams, and connecting-rods can be lubricated, even where there is considerable motion or accelerated speed of the parts, even if the machinery is inclined or out of a horizontal position, and with great economy in the distribution of the lubricant to the parts, as there is no discharge of oil when the machinery is at rest.

I am aware that a tubular column has heretofore been arranged in the center of an oil-cup as a support for a ball-valve that controls the oil-passage through said column, the ball-valve having both a rotary and vertical movement, the latter being controlled by a set-screw that is passed through the cover of the oil-cup. This, however, I do not claim; but,

Having thus described my invention, what I claim, and desire to secure by letters patent, is—

An oil-cup having a screw-cap or cover, a screw-stem passed through said cover, two hemispherical chambers, one of which is formed in the bottom of the cup in an axial line with the oil-passage and the other within the end of the screw-stem, and a ball-valve placed in and between said hemispherical chambers, and adapted to be operated by motion imparted to the machinery to which the oil-cup is attached, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

ROBERT A. FISHER. [L. S.]

Witnesses:

C. W. M. SMITH.
CHAS. E. KELLY.

11201. Def't's Ex. 9. L. S. B. S.

53 UNITED STATES PATENT OFFICE.

JAMES E. WORSWICK, of Montgomery, Alabama, assignor of one-half to Arthur T. Hannon, of same place.

Oil-cup Feeder.

Specification forming part of Letters Patent No. 297,483, dated April 22, 1884. Application filed January 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, James E. Worswick, of Montgomery, in the county of Montgomery and State of Alabama, have invented a new and useful improvement in oil-cup feeders for lubricators, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

My invention relates to oil-cups for machinery, particularly engines, in which the feeders are operated by the motion of the machinery; and the invention consists of the novel construction hereinafter described and claimed.

(Here follows diagram marked p. 52.)

In the drawings, figure 1 is a side elevation, and Fig. 2 is a vertical section, of a lubricator embodying my invention.

A indicates an oil-cup of a well-known design, which I have chosen simply as a convenient one in which to illustrate my invention.

As is well understood, the motion of the part of a machine on which the lubricator is fixed by the shank B—such as the rod-strap of an engine-wheel—will cause the feeding-pin to reciprocate in the outlet in the shank B, and thus feed the oil to the bearing to be lubricated.

I provide the boss C with an external thread, and screw over the same a short tube, D, which is provided with an internal shoulder, E, by which the feeding-pin F is confined therein. The pin has a conical head, G, at its lower end, which is adapted to be seated in a cavity, H, in the upper end of the boss C, and communicating with the outlet, to give the said head the effect of a valve, and which pin is provided with a reduced portion, I, which projects above said tube. The head bears upward against the shoulder E and downward against the seat H when the pin is reciprocated by the motion of the cup in actual use, and the larger portion of the pin, which is fitted in the upper part of the tube D, serves to guide the lower end of the pin, so that the head shall fall plumb on the seat. The pin is to have a vertical movement or play of about one-eighth of an inch.

On the upper end of the tube D is screwed a collar, J, which projects about the same to support the upper end of the pin F, and to

(No Model.)

J. E. WORSWICK.

OIL CUP FEEDER.

No. 297,483. Patented Apr. 22, 1884.

No 161
Market St Ry Co
v
Rowley
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Fig. 2.

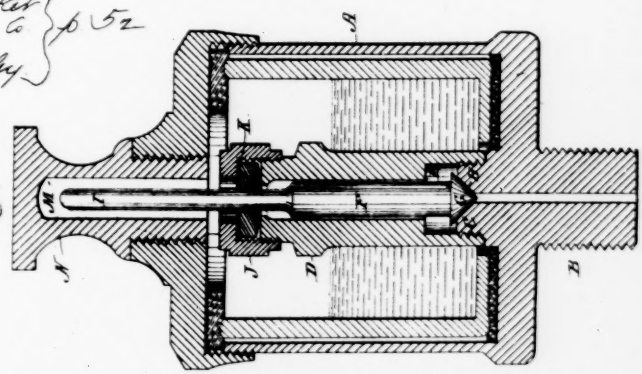
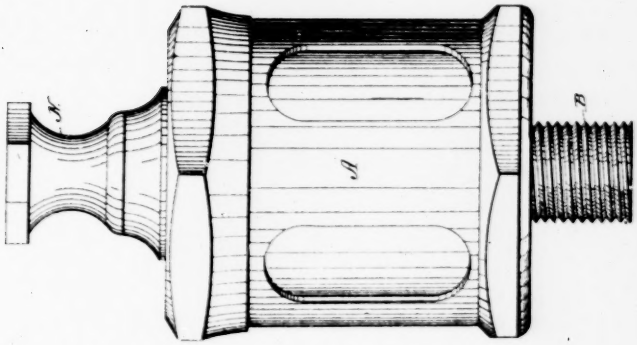


Fig. 1.



WITNESSES:

W. W. Hollingsworth

A. G. Lyne.

INVENTOR:

James E. Worswick

BY Munn & Co

ATTORNEYS.

take the wear caused by the lateral throw of the pin when the cup is in motion. This collar has an internal shoulder, K, at its upper end, against which is fitted a perforated disk or washer, L, which is inserted into the collar at the lower end thereof. The perforation of the disk is of the size of the pin F, which it receives, and the said disk takes the entire lateral wear caused by the throw of the pin. This disk is of such a size as to fit snugly in the collar J. When the disk becomes too much worn, it is taken out and a new one is put in its place, the lubricator being thus quickly and inexpensively repaired without removing the same from its working position, and without any material damage to other parts of the device. The upper end of the pin projects above the collar J into a cavity, M, in the inlet-plug N, where it can be easily touched by the engineer, when the plug is removed to refill the cup with oil, in order that he may know that the pin is free and in proper working condition. The splashing of the oil against the upper end of the pin causes it to be fed gradually down through the tube along the pin and out through the bore in the shank to the part to be lubricated. When the cup is full of oil, the weight of the pin causes it to act as a valve to close the outlet when the device is at rest.

What I claim is—

1. The combination of the tube, the pin loosely arranged therein, and the removable collar secured to the upper end of the tube, and a removable perforated disk contained within the collar to form a bearing for the upper end of the pin, substantially as shown and described.

2. As a removable bearing for the feeding-pin of an oil-cup, a disk having a perforation adapted to form a bearing for the pin, and being made of a size adapted to be fitted in a holding-collar, substantially as shown and described.

JAMES E. WORSWICK.

Witnesses:

M. L. MOSES.
ARTHUR T. HANNON.

11201. Def't's Ex. 10. L. S. B. S.

55 UNITED STATES PATENT OFFICE.

FRED HUMPHREY, of Boston, Massachusetts.

Oil-cup.

Specification forming part of Letters Patent No. 346,205, dated July 27, 1886. Application filed January 28, 1886. Serial No. 190,005. (No model.)

To all whom it may concern:

Be it known that I, FRED HUMPHREY, of Boston, in the county of Suffolk and State of Massachusetts, a citizen of the United States, have invented a new and useful improvement in oil-cups, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification in explaining its nature.

The invention relates to the class of oil-cups known as "crank-pin" oil-cups; and it comprises a cup adapted to be secured to the connection or box of a crank having an oil-passage or feedway from the cup to the pin or part to be oiled, which is adapted to be opened and closed by a loose valve operated by its own momentum produced by the motion of the crank or other moving part.

(Here follows diagram marked p. 54.)

In the drawings, figure 1 represents a vertical central section of the cup. Fig. 2 is a horizontal section upon the line $x\ x$ of Fig. 1. Fig. 3 is a view in vertical central section of a portion of the cup illustrating a slight modification, to which reference is hereinafter made.

The casing a, which preferably is of glass, and which forms the oil receptacle or reservoir a', is attached to a post or standard, B, in any desirable way, and I have represented in the drawings the post as provided with an annular recess, b, adapted to be partly filled with the packing b', upon which the lower edge a^2, of the cup bears, and the covering-disk C, having an annular packing-holding recess, c, and flange c', arranged to hold the packing c^2 upon the top edge of the cup, and to be fastened to the standard or post B by the tube D, which extends upward from the post, and has a screw-thread, d, to receive the disk or cover C, which has a screw-threaded hole, c^3, to fit the screw d. The tube D is connected with the oil-reservoir a' by means of the holes d', and it provides an opening by which the cup is filled, and which is closed by means of the screw-plug E. The screw-plug has a downward extension, e, the office of which will hereinafter be explained. There is formed in the post or standard B the hole or passage F, through which the lubricant escapes from the chamber a' to the bearing or part to be lubricated. At the upper end of this passage there is arranged a valve-seat, f, which preferably is raised slightly above the bottom of the tube, and has

(No Model.)

F. HUMPHREY.

OIL CUP.

No. 346,205. Patented July 27, 1886.

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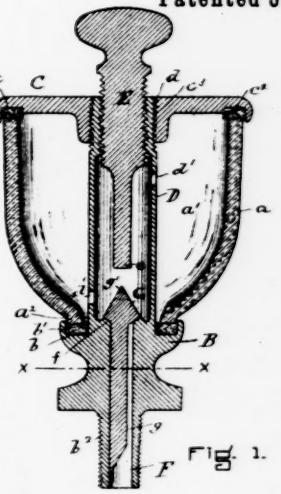


Fig. 1.

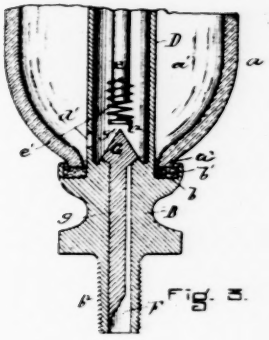


Fig. 3.

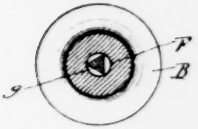


Fig. 2.

WITNESSES.
F. P. Raymond
Fred C. Dean

INVENTOR.
Fred Humphrey

an inclined or conical seat to receive the valve G. This valve G has an inclined or rounded surface adapted to fit the seat of the valve *f*, and a spindle or rod, *g*, which extends downward in the hole F to very nearly its bottom or lower end. The shape of this spindle or stem *g* is such as to provide a continuous passage from the valve-seat along its side, so that upon the lifting of the valve the lubricant may escape through this passage to the part to be lubricated. The post or standard B also has the screw-sleeve b^2, by which the cup is fastened in place.

In operation the oil-cup is moved with greater or less rapidity, according to the movement of the part to which it is attached, and this movement imparts momentum to the valve and spindle G *g* sufficient to cause the valve to be lifted from its seat once at least each revolution of the crank. This movement of the valve allows a small quantity of lubricant to escape through the passage F to the crank-pin or part to be lubricated. The extent of the lift of the valve G is limited by the extension *e* of the plug E, the under surface of which acts as a stop in limiting or controlling the upward movement of the valve. If the cup is moving comparatively slowly no stop is required, as the momentum communicated to the valve is not sufficient to throw it far enough from its seat to make one necessary. If, however, the movement of the cup is rapid, then it is desirable to locate the stop in relation to the valve to limit the extent of its throw produced by the momentum; and it will be observed that this stop is made vertically adjustable in relation to the valve.

In Fig. 3 it will be seen that the stop e^2 is made yielding by the interposition of the spring *e'*, and this form of construction is desirable where it is necessary to obtain a rapid or quick seating of the valve. It will be seen that the valve is extended upward to form a point, *g'*. This shape is desirable for three reasons: First, to permit the lubricant to flow quickly and easily to the seat; second to reduce the friction, and, third to provide a point or projection raised sufficiently above the seat to permit of the use of a stop which shall not interfere with the flow of the lubricant.

I prefer to make the lower end of the stem or spindle *g* inclined, so that the lubricant may easily pass from it upon its downward movement to the part to be lubricated.

When the form of valve shown is used it will be desirable to make the stem or spindle triangular in cross-section, as represented in Fig. 2, in order that the valve may be guided in its movement to and from its seat. It is obvious, however, that other forms of valves and stems or spindles may be used, and I do not confine myself to the particular form herein shown and described. Neither do I confine myself to an oil-cup constructed as herein specified, as the invention is applicable to any oil-cup having any other form of construction.

It will be seen that the cup is filled through a hole in the disk closed by the screw-plug E, and that the screw-plug is made long enough to provide for the vertical adjustment of its lower end, *e*, which acts, as before stated, as a stop, so that the part E acts as a

plug or stopper in closing the supply-inlet, and also as a support for the valve-stop. It will further be seen that the cup acts to deliver lubricant only while in motion, and that at all other times the valve is held to its seat by gravity. It will also be seen that the cup is simple in construction and easily and cheaply made. The cup can, of course, be used on any movable bearing or part, which will communicate motion to the loose valve and cause the operation of the cup.

I am aware of the patent to Renehard, No. 278,742, dated June 5, 1883, for improvement in oil-cups; but I consider that my invention does not embrace any of the features therein described and claimed.

Having thus fully described my invention, I claim and desire to secure by letters patent of the United States—

1. The combination, in an oil-cup of a crank-pin or other movable bearing, of the post B, having the annular recess *b*, the tubular extension or sleeve D, cast therewith, and having the holes *d'*, the interior screw-thread and the exterior screw-thread at its upper end, the disk or cover C, having the recess *c* and flange *c'*, and the packing *c²*, the adjustable screw-plug E, having the extension *e*, extending downward in the sleeve D nearly to the bottom of the cup, the escape-passage F, and the loose valve G, having the conical head *g'*, and the stem *g*, extending downward into the passage F, and the valve-seat *f*, all substantially as described.

2. The combination, in an oil-cup of a crank-pin or other movable bearing, of the post B, having an escape-passage, F, and the valve-seat *f*, the sleeve or extension D, cast therewith, and having the holes *d'*, the plug E, arranged to screw into the sleeve D, and having the part or end *e*, extending nearly to the bottom of the cup to act as a stop for the valve, and the valve G, having the conical head *g'*, extended above the valve-seat *f*, and the long stem *g*, extending into the escape-passage F, substantially as and for the purposes described.

3. The combination, in an oil-cup of a crank-pin or other movable bearing, of a stop located in the lower part of the oil-cup with the loose valve G, having the conical or tapering head *g'*, and the long spindle or stem *g*, extending into the passage F, and the valve-seat *f*, all substantially as described.

4. The combination, in an oil-cup of a crank-pin or other movable bearing, of the plug E, having an extension provided with a yielding stop, *e'*, located near the bottom of the oil-cup with the loose valve G, having the stem or spindle *g*, extending into the oil-escape passage F, and adapted to be moved upward to open the valve by the momentum of the crank-pin, and to be returned to its seat by the combined action of gravity and the yielding stop, substantially as described.

FRED HUMPHREY.

Witnesses:
F. F. RAYMOND, 2D.
FRED. B. DOLAN.

11201. Def't's Ex. 11. L. S. B. S.

56 Endorsed: Engrossed bill of exceptions. Filed April 13, 1891. L. S. B. Sawyer, clerk.

57 *Supersedeas Bond on Writ of Error.*

In the Supreme Court of the United States.

MARKET STREET CABLE RAILWAY COMPANY, Plaintiff in Error, }
vs. }
B. N. ROWLEY, Defendant in Error. }

Know all men by these presents that we, Market Street Cable Railway Company, as principal, and Henry Root and W. E. Brown, as sureties, are held and firmly bound unto B. N. Rowley, defendant in error herein, in the sum of one thousand dollars, lawful money of the United States of America, to be paid to the said B. N. Rowley, his executors and administrators: to the payment of which, well and truly to be made, we bind ourselves and each of us, jointly and severally, and the heirs, executors, and administrators of us and each of us individual sureties, and the successors and assigns of the Market Street Cable Railway Company, the principal herein.

Sealed with our seals. Dated the twenty-third day of March, 1891.

Whereas the above-named Market Street Cable Railway Company has prosecuted a writ of error to the Supreme Court of the United States to reverse the judgment rendered and entered by the circuit court of the United States of America for the northern district of California in the cause entitled B. N. Rowley, plaintiff, *versus* Market Street Cable Railway Company, defendant, No. 11201:

58 Now, therefore, the condition of this obligation is such that if the above-named Market Street Cable Railway Company, plaintiff in error, shall prosecute its said writ of error to effect and answer all damages and costs if it shall fail to make good its plea, then this obligation shall be void; otherwise to remain in full force and virtue.

[Seal of Market St. Cable R. R. Co.]

MARKET STREET CABLE RAILWAY COMPANY,
By J. L. WILLCUTT, *Secretary.*
HENRY ROOT. [SEAL.]
W. E. BROWN. [SEAL.]

Acknowledged, &c.

L. S. B. SAWYER,
Commissioner U. S. Circuit Court, Northern District of California.

UNITED STATES OF AMERICA, } *ss:*
Northern District of California, }

Henry Root and W. E. Brown, being duly sworn, each for himself deposes and says that he is a freeholder in said northern district

and is worth the sum of one thousand dollars in lawful money of the United States of America, exclusive of property exempt from execution and over and above all debts and liabilities.

HENRY ROOT.
W. E. BROWN.

Subscribed and sworn to before me this 23d day of March, 1891.

L. S. B. SAWYER.
Commissioner U. S. Circuit Court,
Northern District of California.

59 Endorsed: The form of the within bond and sufficiency of the sureties thereon are hereby approved. Hawley, judge. Filed March 23, 1891. L. S. B. Sawyer, clerk.

60 In the Circuit Court of the United States, Ninth Judicial Circuit, Northern District of California.

B. N. ROWLEY, Plaintiff,
vs.
MARKET STREET CABLE RAILWAY COMPANY, Defendant.

I, L. S. B. Sawyer, clerk of the United States circuit court of the ninth judicial circuit in and for the northern district of California, do hereby certify the foregoing fifty-nine (59) printed and written pages, numbered from 1 to 59, inclusive, to be a full, true, and correct copy of the record and all proceedings in the above and therein entitled cause, and that the same together constitute the return to the annexed writ of error.

Seal U. S. Circuit Court, Northern Dist. Cal.

Attest my hand and the seal of said circuit court this 1st day of May, A. D. 1891.

L. S. B. SAWYER, *Clerk.*

61 UNITED STATES OF AMERICA, *ss:*

The President of the United States of America to the judges of the circuit court of the United States, ninth judicial circuit, in and for the northern district of California, Greeting:

Because in the record and proceedings, and also in the rendition of the judgment of a plea which is in the said circuit court, before you, between B. N. Rowley, plaintiff and defendant in error, and Market Street Cable Railway Company, defendant and plaintiff in error, a manifest error hath happened, to the great damage of the said plaintiff in error, as by its complaint appears, and it being fit that the error, if any there hath been, should be duly corrected and full and speedy justice done to the parties aforesaid in this behalf, you are hereby commanded, if judgment be therein given, that then, under your seal, distinctly and openly, you send the record and proceedings aforesaid, with all things concerning the same, to the Supreme Court of the United States, together with this writ, so that you have the same at the city of Washington, in the District of Columbia, on the 21st day of May next, in the said Supreme Court to be there

and then held, that, the record and proceedings aforesaid be inspected, the said Supreme Court may cause further to be done therein to correct that error what of right and according to the law and custom of the United States should be done.

Witness the Hon. Melville W. Fuller, Chief Justice of the Supreme Court of the United States, this 23rd day of March, in the year of our Lord one thousand eight hundred and ninety-one, and of the Independence of the United States the one hundred and fifteenth.

Seal U. S. Circuit Court. Northern Dist. Cal.

L. S. B. SAWYER,
Clerk U. S. Circuit Court, Northern District of California.

The above writ of error is hereby allowed.
HAWLEY, *Judge.*

62 [Endorsed:] United States Supreme Court. Market Street Cable Railway Company, pl'ff in error, *vs.* B. N. Rowley, def't in error. Writ of error. Service of the within and foregoing writ of error by copy is admitted this 23d day of March, 1891. Jno. L. Boone, att'y for within-named defendant in error. Filed March 23rd, 1891. L. S. B. Sawyer, clerk.

The answer of the judges of the circuit court of the United States of the ninth judicial circuit in and for the northern district of California.

The record and all proceedings of the plaint whereof mention is within made, with all things touching the same, we certify, under the seal of our said court, to the Supreme Court of the United States of America, within mentioned, at the day and place within contained in a certain schedule to this writ annexed, as within we are commanded.

By the court:

[Seal U. S. Circuit Court, Northern Dist. Cal.]

L. S. B. SAWYER, *Clerk.*

63 UNITED STATES OF AMERICA, *ss:*

To B. N. Rowley, Greeting:

You are hereby cited and admonished to be and appear at the Supreme Court of the United States, to be held at the city of Washington, in the District of Columbia, on the 21st day of May, A. D. 1891, pursuant to a writ of error filed in the clerk's office of the circuit court of the United States of the ninth judicial circuit in and for the northern district of California, wherein Market Street Cable Railway Company is plaintiff in error and you are defendant in error, to show cause, if any there be, why the judgment in the said writ of error mentioned should not be corrected and speedy justice should not be done to the parties in that behalf.

Witness the Honorable Thomas P. Hawley, United States district judge for the district of Nevada, assigned to hold and holding circuit court of the United States for the ninth judicial circuit, northern district of California, this 23rd day of March, A. D. 1891, and of the Independence of the United States the one hundred and fifteenth.

THOMAS P. HAWLEY,
U. S. District Judge, Dist. of Nevada, Assigned to Hold and Holding Circuit Court for the Northern District of California.

64 [Endorsed:] In the Supreme Court of the United States. Market Street Cable Railway Company, pl'ff in error, *vs.* B. N. Rowley, def't in error. Citation. Filed March 23rd, 1891. L. S. B. Sawyer, clerk.

Service of a copy of the within and foregoing citation, by copy, is admitted this 23rd day of March, A. D. 1891.

JNO. L. BOONE,
Attorney for the Within-named Defendant in Error.

65 The Supreme Court of the United States.

MARKET STREET CABLE RAILWAY COMPANY, Plaintiff in Error,
vs.
B. N. ROWLEY, Defendant in Error.

Assignment of Errors.

Afterwards, to wit, on the thirteenth day of April, 1891, at the October term for 1890 of the Supreme Court of the United States, at the Capitol, in the city of Washington and District of Columbia, comes the said Market Street Cable Railway Company, plaintiff in error herein, by Harvey S. Brown, its attorney, and says that in the record and proceedings in the above-entitled matter there is manifest error, in this, to wit:

I.

That, in view of the evidence showing the prior state of the art exemplified by letters patent of the United States—

No. 44107, Dickenson and Nelson, September 27, 1864, car-axle box;

No. 80333, S. Charnley, July 28, 1868, lubricator;

No. 183,606, October 24, 1876, James Vair, oil cup;

No. 247,057, September 13, 1881, G. C. Herrich, oil cup;

No. 258,049, May 16, 1882, J. E. Gilligan, oil cup;

No. 267,584, November 14, 1882, J. C. Pinkney, oil cup;

No. 293,237, February 12, 1884, R. A. Fisher, oil cup;

No. 297,483, April 22, 1884, J. E. Worswick, oil-cup feeder;

No. 346,205, July 27, 1886, F. Humphrey, oil cup—

the circuit court of the United States for the northern district of California erred in overruling the motion of attorney for The Mar-

ket Street Cable Railway Company, the defendant in said
66 court, present plaintiff in error, to direct the jury to return a verdict for the defendant on the ground that the patent sued on is void for want of patentable novelty.

II.

That the circuit court of the United States for the northern district of California erred in refusing to give to the jury the following instruction requested to be given by counsel for The Market Street Cable Railway Company, the defendant in said court, present plaintiff in error, namely:

"If you believe from the evidence that Benjamin W. Lyon and Reuben Munro were at the time they made this invention in the employ of the defendant and that they constructed or acquiesced in the construction of the car-axle lubricators used by the defendant while in its employ, in its time and at its expense, and that they put them or allowed them to be put upon defendant's cars and allowed them to be used, no compensation being paid or demanded, then I charge you that these facts fully justify the presumption of and of themselves constitute an implied license to the defendant to use and to continue to use said car-axle lubricators, and you will return a verdict for the defendant."

Wherefore the said Market Street Cable Railway Company prays that the judgment of the said circuit court of the United States for the northern district of California be reversed and that the said circuit court of the United States for the northern district of California be ordered to enter judgment for The Market Street Cable Railway Company, the plaintiff in error herein.

HARVEY S. BROWN,
Attorney for Plaintiff in Error.

67 [Endorsed:] Supreme Court of the United States. Market Street Cable Railway Co., pl'tiff in error, *vs.* B. N. Rowley, def't in error. Assignment of errors. Harvey S. Brown, att'y for pl'tiff in error.

Endorsed on cover: Case No. 14638. N. California C. C. U. S. No. 161. The Market Street Cable Railway Company, plaintiff in error, *vs.* B. N. Rowley. Filed May 12, 1891.

Office Supreme Court, U. S.
FILED
NOV 10 1894
JAMES H. McKENNEY,
Clerk.

No. 161.

IN THE SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1894.

THE MARKET STREET CABLE RAILWAY COMPANY,
Plaintiff in Error,

vs.

B. N. ROWLEY,
Defendant in Error.

BRIEF OF PLAINTIFF IN ERROR.

IN ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF CALIFORNIA.

OCTOBER TERM, 1894.

HARVEY S. BROWN AND
WM. F. BOOTH,
Attorneys for Plaintiff in Error.

Filed this ..... *day of September, 1894.*

..... *Clerk.*

By .....

Deputy Clerk.

IN THE

SUPREME COURT

OF THE

UNITED STATES.

MARKET STREET CABLE RAILWAY COMPANY, *Plaintiff in Error,*	October Term, 1894.
vs.	No. 161.
B. N. ROWLEY, *Defendant in Error.*	

Brief of Plaintiff in Error.

STATEMENT.

This is an action at law for damages for infringement of letters patent of the United States, No. 365,754, granted June 28, 1887, to Benjamin W. Lyon and Reuben Munro, for car-axle lubricator. The action was brought by the above-named defendant in error, as territorial assignee of the patentees, against the above-named plaintiff in error, in the Circuit Court

of the United States in and for the Northern District of California, and said action coming on regularly for trial during the February term, 1891, of said court, before the court and a jury selected and empaneled to try the same, the jury returned a verdict for the plaintiff, the defendant in error herein, and thereupon judgment was rendered for said plaintiff.

From this judgment the defendant, the plaintiff in error herein, brings this writ of error.

The questions involved are two, to wit:

First—The validity of the patent sued on;

Second—An implied license in the defendant, plaintiff in error herein, to make use in its business of the device of said patent.

The manner in which these questions are raised is by bill of exceptions, duly settled and allowed, and containing the following specific exceptions:

1st. An exception duly taken by the defendant, plaintiff in error herein, and allowed by the Court, to an order overruling a timely motion of its counsel that the Court direct the jury to return a verdict for the defendant on the ground that the patent sued on is void for want of patentable novelty (vide printed transcript of record, page 20).

2nd. An exception duly taken by the defendant, plaintiff in error herein, and allowed by the Court, to the failure or refusal of the Court to give the jury a certain instruction requested to be given by counsel for said defendant, plaintiff in error herein, and relating to implied license (vide printed transcript of record, page 26).

ERRORS ASSIGNED.

The specification of errors relied upon, asserted and urged is found at page 48 of the printed transcript of record. The errors assigned are two, as follows:

1st. That in view of the evidence, showing the prior state of the art, exemplified by letters patent of the United States,—

No. 44,407, Dickenson and Nelson, Sept. 27, 1864, car-axle box;

No. 80,333, S. Charnley, July 28, 1868, lubricator;
No. 183,606, Oct. 24, 1876, James Vair, oil cup;
No. 247,057, Sept. 13, 1881, G. C. Herrich, oil cup;
No. 258,049, May 16, 1882, J. E. Gilligan, oil cup;
No. 267,584, Nov. 14, 1882, J. C. Pinkney, oil cup;
No. 293,237, Feb. 12, 1884, R. A. Fisher, oil cup;
No. 297,483, Apr. 22, 1884, J. E. Worswick, oil-cup feeder;
No. 346,205, July 27, 1886, F. Humphrey, oil cup,—

the Circuit Court of the United States for the Northern District of California erred in overruling the motion of attorney for the Market Street Cable Railway Company, the defendant in said court, present plaintiff in error, to direct the jury to return a verdict for the defendant on the ground that the patent sued on is void for want of patentable novelty.

2nd. That the Circuit Court of the United States for the Northern District of California erred in refusing to give to the jury the following instruction, requested to be given by counsel for the Market Street Cable Railway Company, the defendant in said court, present plaintiff in error, namely:

"If you believe, from the evidence, that Benjamin W. Lyon "and Reuben Munro were, at the time they made this invention, "in the employ of the defendant, and that they constructed or "acquiesced in the construction of the car-axle lubricators used "by the defendant, while in its employ, in its time and at its "expense, and that they put them or allowed them to be put "upon defendant's cars, and allowed them to be used, no com- "pensation being paid or demanded, then I charge you that "these facts fully justify the presumption of, and of themselves "constitute, an implied license to the defendant to use and to "continue to use said car-axle lubricators; and you will return "a verdict for the defendant."

POINTS OF LAW AND FACT.

Argument.

First.—That the Court erred in the first particular assigned.

The patent sued on is found at page 22 of the printed record. It is entitled, Car-axle Lubricator. The object is stated to be "to prevent the oil from dripping on the axle when the car "stands still, and to feed the oil to the axle and bearing when-"ever the car moves and jolts."

In the drawing, of which for convenience in reference we herewith present an enlarged cut, *A* is the car-axle box or bearing; into this is screwed the pipe *B*. To the top of the pipe is screwed a wooden disk *D*, which forms the bottom of an oil cup, the walls of which are designated by *F*, and the cover by *G*. Within the cup, and seated in the top of pipe *B*, is the plug or stopper *C*. Within the cup is a gauge *E*, the free end of which lies just above the head of the plug or stopper *C*.

The specification states: "This plug is stoppering up the "pipe *B*, and prevents the oil from flowing down the pipe when "the car is not in motion, while a gauge is provided for the "purpose to prevent the plug from rising too far when the car "jolts, and the distance between the gauge and the top of the "plug is spaced or regulated by the gauge. For instance, a "large space will admit the plug to rise sufficiently when the "car jolts to obtain thereby a large flow of oil for the bearing "and axle, while a smaller space between the gauge and the "plug admits of a corresponding smaller flow of oil."

The description of the operation (page 23) is as follows: "In "operating our car-axle lubricator we fill the oil cup with oil, "and, when the car jolts, then the plug or stopper *C* jolts and "rises also, whereby an opening between the head of the plug "or stopper *C* and the pipe *B* is made for the oil to pass through "and down the pipe or channel and upon the car axle, lubricat-"ing the same and the bearing."

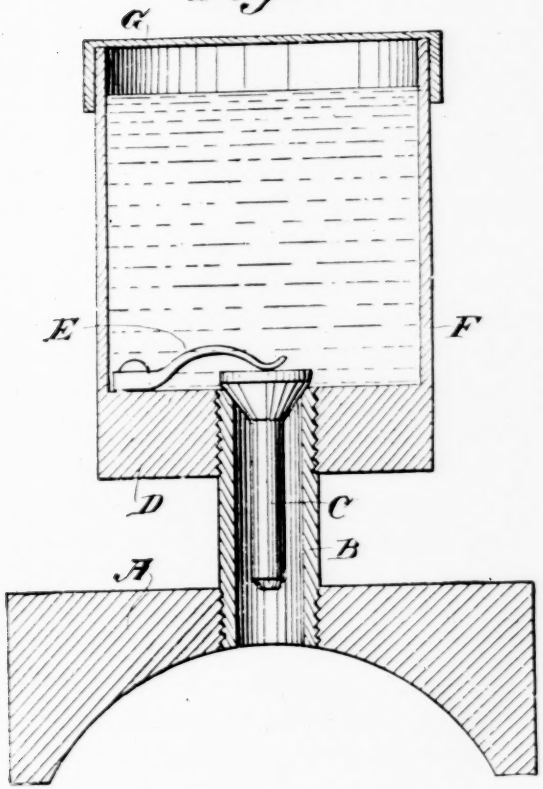
The single claim of the patent is thus expressed, page 23:

"In a car-axle lubricator, the combination, with the axle "bearing *A*, of the oil cup *F*, connected thereto by means of "the screw-threaded pipe *B*, stopper or plug *C*, located in the "channel of said pipe, and gauge *E*, limiting the upward move-"ment of said stopper or plug, substantially as set forth."

The invention sought to be covered by this patent is a device capable of use as a car-axle lubricator, and which is composed of a combination of certain essential elements, to wit, an axle bearing, an oil cup, a screw pipe connecting the cup and bear-

Lyon & Munro.
Pat. June 28, 1887.

Fig. 1.



ing, a stopper or plug in said pipe, and a gauge for limiting the movement of the stopper or plug. These elements are not individually to be restricted to form or construction in any manner, even if such were possible from the disclosures of the specification, for the patentees were careful to avoid any possible restrictions. Thus in their specification we find them referring to the bearing *A* as having a *suitable* hole, so that it should not be supposed they intended any particular form or size of hole; likewise with regard to the seat of the plug head, it need only be a suitable seat; likewise with regard to the plug or stopper itself, they say, "We prefer to make the stopper *C* of the shape as shown "in the drawing, but we do not confine ourselves to that shape "or form, as any other suitable shape may effect the same "result." So, too, with regard to the gauge *E*, they state: "We do not confine ourselves to the shape or form of the gauge "as shown in the drawing, as any other suitable device by "which the gauging of the rise for the plug or stopper is effected "will answer our purpose." Finally, with regard to the cup, they state: "We do not confine ourselves to the shape of the oil "cup as described, as any other oil cup may be changed readily "to admit of the use and application of our stopper and gauge."

From the foregoing it appears that the claim of the patent sued on was intended to, and, in the absence of any prior art, does cover, and must be construed to cover and include, any lubricator which is composed of a cup having an outlet pipe by which it can be connected with an axle bearing, and through which the oil is supplied thereto, said cup having a freely movable controlling stopper, closing the pipe when at rest, and opening it under jar or jolt, and a gauge adapted to control, limit and adjust the movement of the stopper and the consequent flow of the oil.

But devices similar to and absolutely identical with the device of this patent exist in the prior art, and are shown, illustrated, described and patented in letters patent of the United States, anterior to the invention of these patentees. If this satisfactorily appear, Lyon and Munro were not entitled to a patent (sec. 4886, Rev. Stat. of the U. S.), and there was a good defense to this action (sec 4920, Rev. Stat.).

These prior patents are all in evidence, and form part of the bill of exceptions and record upon this appeal. In their application to the case, they may be divided into three classes, namely: first, those in which the essential principle of the patent sued on is embodied; second, those which show, in connection with the parts embodying this principle, a non-adjustable gauge to control the stopper; and third, those in which

the identical combination of said patent is disclosed, even including the adjustable gauge. The first class subtracts so much from the alleged invention as to leave it doubtful, to say the least, if the remainder involve any invention whatever; but, however this may be, this class will serve to illustrate the steps by which the full result of the third class is reached.

The essential principle of this invention is the operation in an oil cup of a plug or stopper, by the jolt or jar of the part to which the cup is attached, so that the oil flows only when the part to be lubricated is in motion, and ceases when the part is at rest.

An oil cup embodying this principle is found in the patent to C. J. Pinkney, No. 267,584, dated November 14, 1882. This patent will be found at page 36 of the printed record. The device consists of a cup *A* having a screw pipe *C*, by which it is connected to the part intended to be lubricated. In this pipe *C* is a central opening *c* for the passage of the oil. This opening is controlled by a stopper in the shape of a ball *D*. The specification states that this valve "serves as a cut off to the open-" ing, and prevents the passage of oil while the cup is at rest."

The operation is thus described in the specification: "By the " jarring of the ball, which is caused by the movements of the " machinery to which the cup may be attached, the opening *C* " is sufficiently uncovered to allow of the escape of small quan-" tities of oil sufficient for lubricating purposes."

The specification further states that "this oil-cup is especially " designed for lubricating the slides of locomotive engines, the " jarring of the ball by the movements of the locomotive being " quite sufficient to allow the cup to discharge the required " quantity of oil without waste. It is an economical oiler, for " when the machinery is at rest there is no discharge of oil."

Obviously it would require no invention to apply this cup to the bearing of a car axle, for in such position the requirement for its operation is the same and would be present, to wit, the jarring or jolting by which the ball would be rolled to one side.

In fact the specification as quoted above, in describing the operation, puts no limitation upon the kind of machinery to which it may be applied, simply stating, "By the jarring of " the ball, which is caused by the movements of the machinery " to which the cup may be attached," etc. In this device are found all the elements of the claim in suit, with the exception of a gauge. In the patent sued on it will be remembered that two functions are ascribed to this gauge. The first is that it prevents the plug or stopper from rising too far, and the second is the

adjusting of the rise of the stopper, so that the flow of oil may be regulated. In the second class of prior patents, devices are disclosed embodying all the elements of the claim sued on, including a gauge, which, however, by reason of non-adjustability, can serve but the first function of the Lyon and Munro gauge, namely, the holding of the stopper in place. As exemplifying this class, reference is first made to the patent to Dickenson and Nelson, No. 44,407, dated Sept. 27, 1864, and found at page 24 of the printed record.

This patent is for an improvement in journal boxes for the axles of railroad cars. The third item in which the invention is stated to consist is in a "self-operating lubricating valve placed in an oil chamber within or at the upper part of the box, and so constructed and arranged as to admit oil in suitable quantities down upon the journal."

In the drawings the oil chamber is *G*. It has in its bottom a recess *k*, with an oil passage *m* down into the box. In this recess is seated a stopper in the form of a ball *I*, which controls the oil passage *m*. The cover *H* of the oil chamber has a pendant socket *J* which, it is stated, retains the ball *I* in its seat. The specification states, "The ball *I* performs the office of a valve, "closing the hole *m when the car is stationary*, but when the *car* "*is in motion* the ball or valve *I* will have a lateral movement "or play imparted to it, so as to admit of a gradual flow of oil "down through the hole *m*," etc.

It will be seen from this patent that even the application of what may be termed a "jolting-valve oil cup" to a car axle bearing was not a new thing at the time of the inventive act of the patentees, Lyon and Munro. Reference is next made to the patent to G. C. Herrich, No. 247,057, dated Sept. 13, 1881, found at page 31 of the printed record.

Here is seen an oil-cup *A* having a screw pipe *C*, by which it is attached to the part to be lubricated. Through the bottom of the cup is a hole, which is in line with the central passage of the screw pipe *C*. In this hole and passage is fitted loosely a stem *d*, on which is a piston *D*, which acts as a valve or stopper to control the oil passage. The specification states: "The "cup being applied to the bearing by inserting the threaded "portion C^3 in a socket provided for it, the piston or puppet "valve *D* rises and falls by the *motion* and *vibration* of the "machinery, and thus allows the oil to flow intermittently from "the cup around the piston and stem and down through the "bore of the plug to the bearing."

In this cup is thus disclosed a plug, or stopper, of the precise form of that of the patent sued on, namely, one with a stem

which extends down into but is smaller than the bore of the oil passage, thereby guiding the plug in its jolting movement, while still permitting the flow of oil by it. There is also disclosed a means for preventing the plug or stopper from jarring out of place by rising too far, for it is obvious that the piston *D* can rise no farther than the solid wall above it.

The patent to J. E. Worswick, No. 297,483, dated April 22, 1884, is next referred to. It is found at page 40 of printed record.

The specification states that the invention "relates to oil cups " for machinery, particularly engines, in which the feeders are " operated by the *motion* of the machinery." In the drawings, *A* is the cup, *B* the screw pipe, *F* is the pin which forms the stopper or plug of which *G* is the head, controlling the oil passage. The head *G* of the stopper or plug is confined between its seat and the overlying shoulder *E*, and the specification states, "The head bears upward against the shoulder and down- " wardly against the seat *H*, when the pin is reciprocated by the " motion of the cup in actual use."

This completes the second class of prior patents. They plainly disclose the combination of the claim sued on, even including a gauge for limiting the movement of the plug or stopper.

But although the claim of the patent sued on makes no other qualification of the "gauge *E*" than that it shall be one " limiting the upward movement of said stopper or plug," it may be argued that it evidently is further qualified by the fact that it must be an adjustable gauge, that is, one which can vary the space between itself and the head of the plug or stopper, and that, therefore, the previously cited patents do not anticipate, in that they show non-adjustable gauges. It may be possible that, in order to save the patent, a court would be willing to read into the claim such further qualification, in view of the broad statements in the specification; for, as has been pointed out, the inventors were very careful to have it understood that any gauge or "any other suitable device by which the " gauging or the rise of the plug or stopper is effected" would answer in their invention. The specification does not state nor does the drawing show just how the adjustment of the gauge is effected, but it is to be presumed that, as the part *E* is shown as a thin strip, its movement from or approach to the head of the plug or stopper is effected by bending it. This, however, as the patentees state, is immaterial provided the gauge be capable of adjustment. Now, in the third class of prior patents, there will be disclosed in each oil cup of each patent every element of the claim sued on, even to a

gauge having all the functions of the gauge *E*, including adjustability. Reference is first made to the patent to S. Charnley, No. 80,333, dated July 28, 1868, and found at page 27 of printed record. For convenience of reference we include in this brief an enlarged cut of the Charnley cup. This patent shows a cup *A* having a screw pipe by which it is connected to the part to be lubricated. In the internal cage *B*, which communicates with the oil passage, is a valve or stopper *D*, the stem of which is triangular (Fig. 3), whereby it will fit loosely in the oil passage and allow the oil to descend. In the top of cage *B* is a screw *E*, the lower end of which lies just above the valve or stopper *D*. The specification refers to this screw and its function as follows: "*E* is a regulating screw which works through the top of the "cage, and which controls the movement of the valve. By "turning this screw up or down the valve will be allowed to "*rise more or less, and consequently feed the oil faster or slower.*" This Charnley cup belongs to the general class of "jolting stopper cups." The specification states, "This invention consists "in so arranging a valve in an oil cup that it can be raised by "the motion of the part to which the cup is attached, and closed "by its own gravity, so that the discharge of the oil will depend "upon the rapidity of the motion up and down." Again, "The "quantity of oil thus distributed will depend upon the velocity "of the motion and the amount of movement allowed the valve."

This patent presents an absolute anticipation of the claim sued on. It is an obvious anticipation, and the Court can for itself, by mere inspection, as in cases of infringement, determine such anticipation. There is nothing left in the claim sued on. Every element is found in the prior patent to Charnley, said elements being individually identical, having the same individual functions, and entering into and forming the same combination, in which their functions are called forth in the same manner, in which they co-act in the same way to produce the same result by the same mode of operation, and constitute the same idea of means. This is complete identity and anticipation. The same combination is found in the patent to R. A. Fisher, No. 293,237, dated February 12, 1884, found at page 38 of printed record.

Charnley.
Pat. July 28, 1868.

Fig. 1.

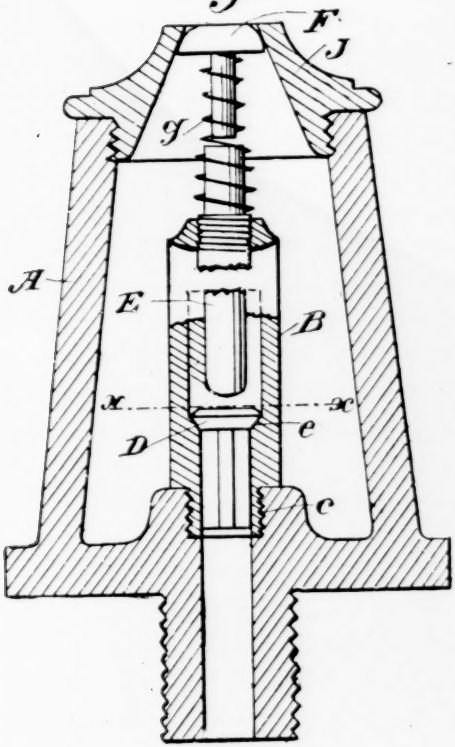


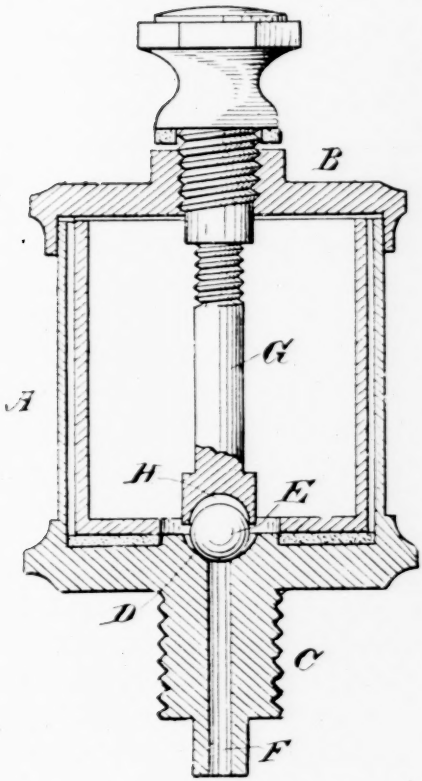
Fig. 2.

Fig. 3.

In this device (a cut of Fig. 1 of which we here include) there is a cup with a screw-pipe to attach it to the part to be lubricated. Controlling the oil passage is a ball stopper *D*, and controlling the ball is an adjustable screw stem *G*. The specification expressly states that by this device the quantity of oil for running a given length of time can be gauged to a certainty, and none be allowed to run to waste. The function of the screw stem *G*, with its hemispherical chamber *H*, is stated to be to limit the upward movement or throw of the valve when the machinery is in motion, and that it can be so adjusted as to shut down over the ball valve and limit its throw to a thirty-second of an inch if necessary.

Fisher.
Pat. Feb. 12, 1884.

Fig. 1.



Finally the patent to F. Humphrey, No. 346,205, July 27, 1886, found at page 42 of printed record, shows the same combination. We herewith present for reference an enlarged cut of Fig. 1 of this patent: Here there is a cup having a screw pipe, a headed plug or stopper in the oil passage, and an overlying adjustable screw gauge *E*. The specification states as follows: "In operation the oil cup is moved with greater or less rapidity, "according to the movement of the part to which it is attached, "and this movement imparts momentum to the valve or spindle "*G g* sufficient to cause the valve to be lifted from its seat once "at least each revolution of the crank. This movement of the "valve allows a small quantity of lubricant to escape through "the passage *F* to the crank pin or part to be lubricated. The "extent of the lift of the valve *G* is limited by the extension *e* "of the plug *E*, the under surface of which acts as a stop in "limiting or controlling the upward movement of the valve. "If the cup is moving comparatively slowly no stop is required, "as the momentum communicated to the valve is not sufficient "to throw it far enough from its seat to make one necessary. "If, however, the movement of the cup is rapid, then it is "desirable to locate the stop in relation to the valve to limit the "extent of its throw produced by the momentum; and it will "be observed that this stop is made *vertically adjustable* in "relation to the valve." It is also stated that the cup "acts to "deliver lubricant only while in motion, and that at all other "times the valve is held to its seat by gravity." And finally, that no error may arise as to the application of the device, the patentee, Humphrey, states: "The cup can, of course, be used "on any movable bearing or part which will communicate "motion to the loose valve and cause the operation of the cup."

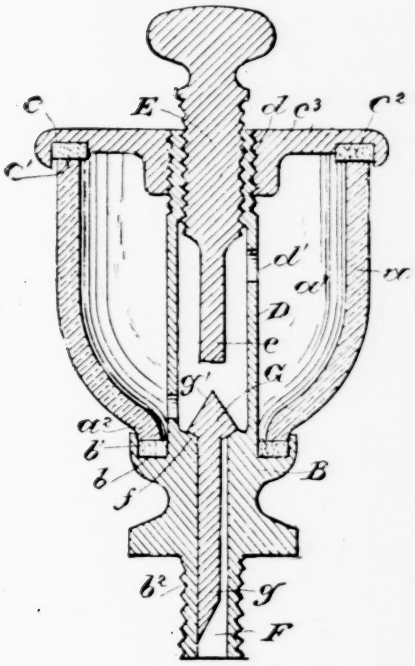
The remaining patents found in the record need not be specially referred to. Those above described are sufficient for every purpose of establishing entire want of patentable novelty in the patent sued on.

An effective test of the anticipatory character of the last three prior patents, to wit, Charnley, Fisher and Humphrey, is that frequently applied by this Court, a late instance being in the case of *Ide* vs. *Ball Engine Co.*, 149 U. S., 550 (see bottom of page 556), wherein it is stated that, if the novelty claimed for the patent sued on could be supported, the Buckeye Governors would be an infringement, but, as these latter existed before the patent, they are an anticipation. So in the present case, if the claim of the Lyon and Munro patent sued on can be supported, the oil cups of Charnley, Fisher and Humphrey would be an

Humphrey.

Pat. July 27, 1886.

Fig. 1.



infringement, but, being prior to the patent in suit, they must be anticipations.

If it be possible to show differences in form and arrangement between the Lyon and Munro lubricator and those of the prior art, these can only be immaterial ones, and will not support the patent.

Hill vs. *Wooster*, 132 U. S., 693.
Burt vs. *Evory*, 133 U. S., 349.
Butler vs. *Steckel*, 137 U. S., 21.
Shenfield vs. *The Nashawannuck Mfg. Co.*, 137 U. S., 56.
Florsheim vs. *Schilling*, 137 U. S., 64.

If there be a difference, such as making the cup of a tin can with a wood bottom, the stopper of a screw or nail, the oil channel of a piece of gas pipe and the gauge of a piece of bendable sheet tin, as was done in practice, no disclosure is made of these in the patent, and they will not be read into the claim.

Grant vs. *Walter*, 148 U. S., 547 (554).

But, even were it otherwise, these things are not invention and do not deserve to be called mechanical skill, but, should they be regarded as showing such skill, they will not support the patent.

Day vs. *The Fair Haven & Westville Railway Co.*, 132 U. S., 98.
Royer vs. *Roth*, 132 U. S., 201.
Marchant vs. *Emken*, 132 U. S., 195.
French vs. *Carter*, 137 U. S., 239.
Watson vs. *Cinn., Ind., St. L. & Chicago Railway Co.*, 132 U. S., 161.
Duer vs. *Corbin Cabinet Lock Co.*, 149 U. S., 216.

If it be said this device is a car-axle lubricator, the reply is that lubricators of this kind have been previously applied to cars (see Dickenson and Nelson patent, page 24 of printed record). But all the other cups of the prior art are stated to be applicable to any jolting machinery, and their application to a car axle is at best but the application to an analogous use, and this will not support invention.

Lowell Manufacturing Co. vs. *Cary*, 147 U. S., 623, and cases collected and cited therein on pages 636, 637.
St. Germain vs. *Brunswick*, 135 U. S., 227.
Grant vs. *Walter*, 148 U. S., 547 (553).

In the bill of exceptions, at pages 7 and 8 of the printed record, will be found statements relative to the Market street cable cars, to wit, that they were different from other cars in certain particulars, and that the way of oiling their axle bearings previous to the application of the Lyon and Munro lubricator caused trouble and annoyance. The idea involved in these statements appears to be that the patentees, Lyon and Munro, might have had some problem to solve in the application to these particular cars of their lubricator, and that, therefore, in this application there may have been invention.

The answers to any argument thus founded are simple. The Lyon and Munro patent discloses nothing of this. In the patent sued on it is not pointed out that the lubricator therein described and claimed is especially applicable to and was intended for these particular or any particular cars. And, finally, nowhere in the record does it appear that the newly and differently constructed Market street cars presented a problem of application by reason of their different construction.

It is, however, obvious that the Charnley device, page 27, the Fisher device, page 38, and the Humphrey device, page 42, could be applied, and with the same effect, to any purpose and to any bearing to which the Lyon and Munro lubricator could be applied.

The motion made in the court below by this plaintiff in error, to wit, that the Court direct the jury to return a verdict for the defendant on the ground that the patent sued on is void for want of patentable novelty, was both timely and proper. It was made at the CLOSE *of the whole evidence* (bottom page 18), and, upon being denied, an exception was taken, which was duly allowed. The denial of this motion is upon this appeal assigned as an error. If it should have been granted, it was error to deny it. That it should have been granted is, we think, fully proven by the foregoing demonstration of the want of patentable novelty in the patent sued on; and, if this demonstration be accepted as good, the Court below erred in denying the motion, the exception to which forms the first assignment of error herein.

That the motion was timely, that it was proper, and that it should have been granted, *vide*

Fond du Lac County vs. *May*, 137 U. S., 395.
May vs. *Juneau County*, 137 U. S., 408.
Heald vs. *Rice*, 104 U. S., 737.
Randall vs. *Baltimore & Ohio R. R. Co.*, 109 U. S., 478.

Second—The Court erred in the second particular assigned. The Court was asked by defendant, present plaintiff in error, to give to the jury the following instruction :

"If you believe, from the evidence, that Benjamin W. Lyon "and Reuben Munro were, at the time they made this inven- "tion, in the employ of the defendant, and that they con- "structed or acquiesced in the construction of the car-axle "lubricators used by the defendant, while in its employ, in its "time and at its expense, and that they put them or allowed "them to be put upon defendant's cars, and allowed them to be "used, no compensation being paid or demanded, then I charge "you that these facts fully justify the presumption of, and of "themselves constitute, an implied license to the defendant to "use and to continue to use said car-axle lubricators, and you "will return a verdict for the defendant."

The Court refused to give the above instruction, and an exception was duly taken and allowed.

This instruction should have been given. The facts recited in it, if found to exist, constitute an implied license.

Lane & Bodley Co. vs. *Locke*, 150 U. S., 193.
Solomons vs. *U. S.*, 137 U. S., 342.
Hapgood vs. *Hewitt*, 119 U. S., 226.
M'Clurg vs. *Kingsland*, 1 How., 202.
Barry vs. *Crane Bros. Manufacturing Co.*, 22 Fed Rep., 396.

See also intimation in

Dalzell vs. *Dueber Watch Case Manfg. Co.*, 149 U. S., 315 (bottom page 326).

The instruction, if proper in law, was well grounded for its facts in the testimony.

Benjamin W. Lyon, one of the patentees, testified that, at the time he made this invention, he was in the employ of the defendant company as foreman of car repairs (page 8 of record), and that he has ever since been in its employ (page 11) ; that the company never asked him for a license or right to use the cup, and that he put on the first one, and thereafter all the men kept putting them on "the same as we do anything else" (page 10); that he never received any remuneration for their use (page 11); that he himself made most of the early cups placed on the cars, and that the blacksmiths made others after they got started in (page 12); that he knew of this, for he instructed the blacksmiths how to make them (page 12); that the first ones were put on by his (Lyon's) request, and that,

during all the time after he had obtained his patent, they were put on in the same way, by himself, by the blacksmiths, and those who were working on the trucks (page 12); that they were all made under his instructions, and he knew of their being put on the cars (page 13); that he never made any demand on the company for compensation for the use of these cups, and his reason for not doing so is this (page 13):

"Well, really I did not take a great deal of interest in it. "There is a great many things that I have put on their cars "that I never give a second thought. My idea was to make it "as practicable as possible and help out in every way to make "the thing a success, and the way I happen to get a patent "on this was because Mr. Munro was interested in the matter "with me. Otherwise I hardly think I should have got a "patent on it. Mr. Munro put up all the money. He put it up "simply because he was in a position to do it, and he wanted it "patented, and he was in it with me, and I was in a position "that I could not say no, and I said go ahead, and he done so."

He further testifies, in answer to the question (page 13) as to whether he meant the railroad company should use the cups without paying for them: "I didn't think anything about it at "all—never give it a thought." As to the use of the company's time, money and material in getting up the invention, he testifies as follows (pages 13 and 14):

"Q. Did you use any of the company's time, money or "material in making this invention?

"A. Their material all goes into that; every one of those boxes "that went on was made of their material.

"Q. Undoubtedly. But I mean in working up and getting "this invention?

"A. The first one, do you mean?

"Q. Yes, sir, the first one.

"A. Well, I don't know.

"Q. They don't use any yeast powders, do they?

"A. Well, I don't know. I picked up an old tin cup—might have got it there. I don't remember where I got it. It was nothing but a piece of wood with a hole bored in it.

"Q. You don't know whether that belonged to the company or not?

"A. Well, I don't know. I guess it must have belonged to them—found it around their shops.

"Q. Did you take any of the company's time in getting up this thing?

"A. Oh, I guess I made that box on the company's time, undoubtedly, because it was during the company's time that the box was made."

Reuben Munro, the other patentee, testifies (pages 14–17) that he has been in the employ of the defendant company for over six years, and that he is a wood-worker in the car-repairing department. He never made any demand on the company for royalty or recompense for the use of the cup (page 15); that he knew of its use on the cars from the beginning (page 15), and that it is likely he put some of the cups on the cars himself. Further, that he was in the employ of the company at the time he made the invention (page 16). He does not think he took any of the time of the company in getting up the invention, yet he subsequently testifies that all the interviews he ever had with his joint patentee, Lyon, in relation to the getting up of the invention, were had during business hours, and that all the experiments were carried on during such hours at the various car houses of the company (pages 16 and 17). He also testifies that all the experiments were made with the materials of the company (page 16).

The inventors had to get somebody's permission to put the cup on the cars in the first place, and they got the consent of Mr. Morton, the superintendent, but nothing can be deduced from this bare fact to controvert the evident intention of the patentees, as shown by their acts, both prior to application for a patent and subsequent to the issuance thereof, to give to their employer company the right to use their cups. Nor did they ever question this right, and it was not questioned until the patent was assigned and this action was brought to recover damages for the use of the very devices put on the company's cars by the patentees, and allowed by them to be used.

The transcript (pages 19 and 20) contains that portion of the charge of the Court to the jury relating to this matter. This is for the purpose of showing that, though this is the only matter in his charge having any bearing on the subject of this second exception, it fails to cure the error in the refusal to give to the jury the instruction asked for. In the instructions given (as per transcript, pages 19 and 20) only one branch of the law of implied license is considered, to wit, that founded upon section 4899 of the Rev. Statutes of the U. S., wherein it is provided that, where an inventor allows another to purchase or construct his invention before he applies for a patent, the specific thing so made or purchased can be used and sold without liability under the subsequently granted patent. Under this section *Dible Grain Shovel Company* vs. *Flint*, 137 U. S., 41, falls, and some of the earlier cases, such as *Wade* vs. *Metcalf*, 16 Fed. Rep., 130, and one branch of the consideration in

M'Clurg vs. *Kingsland*, 1 How., 202, have been decided in view of the similar provision, section 7, in the earlier Act of 1839.

But these sections do not cover the whole doctrine of implied license, nor is the general principle involved in the doctrine dependent upon them at all; and an implied license may arise and has been held to exist (as in cases cited heretofore) in the relation of employer and employee wholly independent of the express terms of section 4899, Rev. Stat., and to which the limitation of use of the specific device made or purchased prior to application does not apply.

In the case at bar the instruction given by the Court below is proper as far as it goes, and is well founded upon the testimony in the case concerning the use of those specific cups put on the cars prior to the application for a patent. But we contend that, under the law and the facts, the implied license to the company extends beyond the application for a patent, and is not limited to the specific cups put on prior to said application.

Respectfully submitted,

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Office Supreme Court,
FILED
DEC 3 1894
JAMES H. McKENNEY,
CLERK.

No. 161.

In the Supreme Court of the United States.

OCTOBER TERM, 1894.

THE MARKET STREET CABLE RAILWAY COMPANY,
Plaintiff in Error,

vs.

B. N. ROWLEY,
Defendant in Error.

BRIEF OF DEFENDANT IN ERROR.

IN ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF CALIFORNIA.

OCTOBER TERM, 1894.

JOHN H. MILLER AND
JOHN L. BOONE,
Attorneys for Defendant in Error.

Filed this ..... *day of November, 1894.*

..... *Clerk.*

By .....

Deputy Clerk.

IN THE

SUPREME COURT

OF THE

United States.

THE MARKET STREET CABLE RAILWAY COMPANY, *Plaintiff in Error,* vs. B. N. ROWLEY, *Defendant in Error.*	October Term 1894. No. 161.

DEFENDANT'S PRINTED ARGUMENT.

THE FACTS.

The Plaintiff in Error, as its name implies, is a Railway Corporation, which owns and operates a large number of street cars in, along and through various streets of San Francisco. Its cars are operated by

the cable system, and their construction is very different from the ordinary street cars which were in use at the time, and prior to the starting of its system.

Before the Market street line was built all street cars were mounted on two axles, one near each end, and wheels of comparatively large diameter, say from eighteen inches to two feet in diameter, carried the axle and car. In equipping its lines the Market street corporation (Plaintiff in Error) built cars of an entirely new construction. Instead of mounting the car body on the ordinary wheels and axles, it built low trucks, similar in construction to the trucks which are used to carry the ordinary passenger coaches on railways. These trucks being intended for street cars were necessarily small and were carried on wheels not more than twelve inches in diameter, so that the car body would come close to the ground for convenience in permitting passengers to enter and leave them from the street. Each truck was carried on four small wheels, and one truck was placed under each end of the car, so that each car was carried on eight wheels instead of four. *This new construction involved new conditions, one of which was that it did not permit the use of the oiling devices that had previously been used on other cars.* The company, however, attempted to use the oiling device of former cars and found that it was impractical. The result was that its cars could not make the run without heating the boxes, and it was necessary to keep running them into the repair shop for repairs. This became so burdensome that the Superintendent of the road asked Mr. Lyon, who was the foreman of car repairs, if he could not devise some means to prevent the trouble.

Mr. Lyon investigated the matter and found that there was no suitable oiling device in the market to

remedy the trouble, and he then went to work on his own hook to devise something that would. After a series of experiments, which he details at folio 16, Record, he at last devised a cup like the patented cup (page 22, Record), except that it had no spring gauge to keep the plug (or screw) which served as a valve to its seat. This was a partial success, but the plug (screw) was liable to tilt or get stuck and thus permit all the oil to run out of the cup. At this stage Mr. Munro (who was a wood-worker in the car repair shop) came to the rescue and suggested the spring gauge which keeps the valve to its seat, and this perfected the cup.

The first cups that were made were made of tin yeast powder cans with a wooden bottom in which a short piece of gas pipe was screwed to serve as a conduit or passage for the oil, and a common screw was used for a valve. The head of the screw served as the valve and the tail of the screw served as a weight to keep the valve plumb.

Seeing the value of the cup the two inventors applied for and secured the letters patent No. 365,754.

The yeast powder cups with wooden bottom soon gave out, as the oil swelled the wood and burst the can. The Superintendent of the road seeing the success of the cup, ordered metallic cups made and placed on all the cars of the road, which was done.

The metallic cups were all marked with the word "Patented," together with the date of the patent, so that the principals of the road knew that the cup was patented.

At the time of the commencement of the suit the Plaintiff in Error had over 1,200 of said patented cups in use.

WAS THE INVENTION ANTICIPATED?

In oiling the journals of this class of cars the only action depended upon to feed the oil to the bearings was *the tremor of the car when it was moving.* Occasionally the car would feel a veritable jolt, for instance at a switch, or at the joint of the rails, but the motion depended upon was slightly more than a tremor. The screw alone, without the gauge spring, would feed all right as long as the tail of the screw (valve) remained in its exact position central with the bore of the oil passage, but in ascending inclines the tail would be defected by gravity and thus displace the head or valve so that the oil would run out, without interference, and thus waste the oil, with the consequence of a hot box, and also an unusual jolt would throw the valve too high and it was liable in dropping back to bind and stick with the same result. The spring gauge which presses upon the head of the screw or valve, *is a very slight spring.* Its pressure is just enough to keep the valve steady and yet allow it to rock on the valve seat under the tremor of the car. At the same time it positively prevents the valve from jumping or getting displaced.

The construction and application of the valve, it will be noticed, is peculiar in this. The valve (screw) has a large head with inclined or tapering under face to bear on the valve seat. The tail of the valve (screw) is very much smaller in diameter than the bore of the tube, or oil passage in which it hangs. The result of this construction is to *allow the tail of the valve (screw) to swing back and forth in the bore or oil passage under*

the tremor and swaying of the car, and by this swinging operation the valve (head of the screw) is caused to wabble on its seat and thus feed oil past it to the bearing or journal.

Not one of the references cited (although in general construction like the one shown in patent 365,754) is calculated or adapted to do the work of oiling a street car in the way it is performed by this valve. All these references except the one shown on page 24, Record, belong to a class known as cross head or wrist pin oil cups, where they receive a violent and regular motion. Take first the Dickinson & Neilson cup (page 24, Record. This is a cup for oiling the axles of railroad cars *where the cars run on level grades.* Put it on one of the Market Street Company's cable street cars, where the car is run over grades that at times place the car at an angle of thirty degrees and where would the ball valve go. It is quite evident that it would roll to one side and uncover the oil passage so that the oil would all run out. It needs the spring gauge to keep it in place, and a spring gauge would destroy its efficiency, because the slightest pressure on a ball would hold it wherever it would roll to. It has no stem to guide it and it would therefore be a perfect failure for cable cars.

Charnlay's lubricator (page 27, Record) would not operate at all on street cars. It requires a rapid motion up and down to make it feed. It is intended to be used on a *crank or wheel* where violent motion is imparted to it (see specification). It is not a sensitive oiler, like the one shown in patent 365,754. No spring gauge bears on the valve. It has a regulating screw, but it does not press on the valve but simply serves to limit the jump of the valve to a positive distance.

Vair's oil cap (page 29, Record) is a cross-head

valve, which is worked by a horizontal slide. It is a roller valve and is in no way adapted for oiling a wheel bearing.

Herrich oil cup (page 31, Record) is not adapted for the work, because the valve, or piston D, is flat and works in a vertical cylinder. The vibation or tremor of a street car would have no effect whatever in feeding oil past the valve. It has nothing to keep it to its seat except its own gravity. On an incline it would be inoperative. It belongs to the class of oilers used on crank pins where a violent up and down motion is imparted to it which alternately and positively seats and unseats the valve at each throw and supplies intermittent charges of oil.

Gilligan's oil cap (page 33, Record) belongs to the same class. It depends on violent motion to operate it, as will be readily understood when the function of the *hinged operating lever f* is understood. This lever has a broad, flat wing, *f* 2, Fig. 4, which serves as a sail or blade to catch the splash or wave of oil as it is agitated up and down by the motion of the cup and thus raise and lower the valve. It would be of no value on a street car.

Pinkney oil cup (page 36, Record) has a ball valve and is subject to the same objection as Dickinson & Neilson's oiler on page 24, Record. It would be of no use on an incline. The same is true of Fisher's oil cup (page 38, Record).

Worswick's oil cup (page 40, Record) has the stem of the valve uppermost and it has no spring gauge to keep it to its seat. It is somewhat like the Lyon & Munro cup before Munro added the spring, only it is not so good, because the valve would be more liable to bind when unseated because the stem being uppermost would bind in its bearings.

Humphrey's oil cup (page 42, Record) is a crank pin oiler. It depends on violent motion (see page 43, Record). The spring which is placed above the valve does not bear upon the valve, but simply serves to reseat the valve quickly. It also is similar to the Lyon & Munro cup before Munro added the spring gauge. It lacks the element of the spring gauge.

These are the references on which the defense in this case bases its claim of anticipation. If the patent sued on is void on the ground of anticipation, what will become of the patents cited as reference? It is quite apparent that the oil cup represented by the patent sued on is much more different from the references than they are from each other. None of them contain all the elements of the patented cup, and none of them operate in the same way or can be substituted for the patented cup and do the work successfully. Oil cups are as old as machinery, and it requires more inventive ingenuity to improve in a field that is so completely filled, than it does to discover and invent in an entirely new field. We submit that the patent is good and valid over all these references.

We absolutely deny the proposition advanced by Appellant's Counsel that either of the prior patents show a spring gauge like Appellee's. Appellee's gauge presses continually upon the valve. There is no space between the valve and gauge, and its adjustability is only required when the car is transferred from a road where the grades are light to one where the grades are heavy. Then by turning the screw that forces the spring against the valve the spring will act with greater pressure on the valve, or the same result could be obtained by bending the spring to increase its pressure on the valve. This puts an additional pressure on the valve and limits the swing of the tail. Attor-

neys for appellant persist in misunderstanding the character and office of this spring and the peculiar action of the valve, although the operation has been over and over again explained to them.

THE QUESTION OF LICENSE.

Attorneys for Appellant insist that because the inventors (Lyon & Munro) permitted the Appellant to use the patented oil cup on its cars before they applied for their patent, such permission was a license to appellant to use the patented cup *without limit* during the entire life of the patent. This is not the law. We admit that such prior use was a license to use the *specific oil cups that were put on its cars prior to the patent* until they were worn out, but it was no license to make and use the patented article after the date of the patent.

McClurg vs. *Kingsland*, 1 How., 202.
Brickill vs. *Mayor of N. Y.*, 18 Blatch., 273.
Wade vs. *Metcalf*, 129 U. S., 202.
Dable Grain Shovel Co. vs. *Flint*, 137 U. S., 41.

The case of *Solomons* vs. *U. S.*, 139 U. S., 342, is not the case here presented. This is not a suit brought by an assignee after the patentee had fixed a license by consent and then parted with his patent as in that

case. Here the patentees themselves brought the suit. They never consented that the company should use their oil cups free. Mr. Munro testifies (folio 29, Record) that the invention was not made in the time of the company. Lyon testified (page 14, Record) that the *specific oil cups* that he put on appellant's cars were made in the company's time, but the *invention* was not made in the company's time nor with its material. They picked up some yeast powder cans that they found lying around and converted them into oil cups. This certainly was not using the company's material. But even if it was, the case of *Dable Grain Shovel Co.* vs. *Flint, supra*, is the authority that governs the case.

THE CONSTRUCTION OF THE PATENT.

On page 17 of Appellant's brief attorneys for Appellant say that because the Lyon & Monro patent does not specifically state that the patented cup "is especially applicable to and was intended for these particular or any particular cars the patent is inoperative. This is not the law. It has been held over and over again that a patentee is entitled to all the benefits arising out of his invention, whether he specified them or not, and it would have been superfluous matter to enter into a history of the special use and

application of the invention. The article itself is the thing patented, and the patentee may use it whenever and wherever he finds its use available. The qualities of an article are inherent in the article itself, and investigation under proper testimony will develop them, as in this case.

We submit that the Court did not err.

Respectfully submitted,

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